

## Gromacs 5.1.4 for Primargy

### Webpage

<http://www.gromacs.org/>

### Version

5.1.4

### Tools for Compiling

- Intel Compiler 16.0.2
- Intel MPI 5.1.3.181
- cmake 2.8.12

### Necessary Files for Compiling

- gromacs-5.1.4.tar.gz
- [int128.patch](#)

### Patch Files

int128.patch

```
--- src/external/boost/boost/config/compiler/intel.hpp.orig 2014-06-18 00:14:19.000000000 +0900
+++ src/external/boost/boost/config/compiler/intel.hpp      2014-07-09 09:59:27.000000000 +0900
@@ -35,10 +35,14 @@
 #endif

 #ifdef BOOST_INTEL_STDCXX0X
+#ifndef BOOST_COMPILER
 #define BOOST_COMPILER "Intel C++ C++0x mode version " BOOST_STRINGIZE(BOOST_INTEL_CXX_VERSION)
+#endif
 #else
+#ifndef BOOST_COMPILER
 #define BOOST_COMPILER "Intel C++ version " BOOST_STRINGIZE(BOOST_INTEL_CXX_VERSION)
 #endif
+#endif
 #define BOOST_INTEL BOOST_INTEL_CXX_VERSION

 #if defined(_WIN32) || defined(_WIN64)
@@ -303,10 +307,6 @@
 # define BOOST_HAS_STDINT_H
 #endif

-#if defined(_LP64) && defined(_GNUC_) && (BOOST_INTEL_CXX_VERSION >= 1310)
-# define BOOST_HAS_INT128
-#endif
-
//
// last known and checked version:
#if (BOOST_INTEL_CXX_VERSION > 1310
```

### Procedure of Compiling

```
#!/bin/csh -f
umask 022
set file_gromacs=/home/users/${USER}/build/gromacs514/gromacs-5.1.4.tar.gz
set file_patch2=/home/users/${USER}/build/gromacs514/int128.patch
set prefix=/local/apl/pg/gromacs514
set work=/work/users/${USER}
#-----
```

```

-----
cd ${work}
if (-d gromacs-5.1.4) then
  mv gromacs-5.1.4 gromacs-erase
  rm -rf gromacs-erase &
endif
tar xzf ${file_gromacs}
cd gromacs-5.1.4
patch -p0 < ${file_patch2}
#
setenv CC icc
setenv CXX icpc
setenv F77 ifort
setenv F90 ifort
setenv FC ifort
mkdir rccs-s
cd rccs-s
cmake28 .. -DCMAKE_INSTALL_PREFIX=${prefix} \
  -DCMAKE_VERBOSE_MAKEFILE=ON \
  -DGMX_MPI=OFF \
  -DGMX_GPU=OFF \
  -DGMX_DOUBLE=OFF \
  -DGMX_THREAD_MPI=OFF \
  -DGMX_FFT_LIBRARY=mkl \
  -DREGRESSIONTEST_DOWNLOAD=OFF
make -j 12
make install
cd ..
#
mkdir rccs-d
cd rccs-d
cmake28 .. -DCMAKE_INSTALL_PREFIX=${prefix} \
  -DCMAKE_VERBOSE_MAKEFILE=ON \
  -DGMX_MPI=OFF \
  -DGMX_GPU=OFF \
  -DGMX_DOUBLE=ON \
  -DGMX_THREAD_MPI=OFF \
  -DGMX_FFT_LIBRARY=mkl \
  -DREGRESSIONTEST_DOWNLOAD=OFF
make -j 12
make install
cd ..
#
setenv CC mpiicc
setenv CXX mpiicpc
setenv F77 mpiifort
setenv F90 mpiifort
setenv FC mpiifort
mkdir rccs-mpi
cd rccs-mpi
cmake28 .. -DCMAKE_INSTALL_PREFIX=${prefix} \
  -DCMAKE_VERBOSE_MAKEFILE=ON \
  -DGMX_MPI=ON \
  -DGMX_GPU=OFF \
  -DGMX_DOUBLE=OFF \
  -DGMX_THREAD_MPI=OFF \
  -DGMX_FFT_LIBRARY=mkl \
  -DMPiEXEC=/opt/intel/impi/5.1.3.181/intel64/bin/mpirun \
  -DREGRESSIONTEST_DOWNLOAD=OFF
make -j 12
make install
cd ..
#
mkdir rccs-mpi-d
cd rccs-mpi-d
cmake28 .. -DCMAKE_INSTALL_PREFIX=${prefix} \

```

```
-DCMAKE_VERBOSE_MAKEFILE=ON \  
-DGMX_MPI=ON \  
-DGMX_GPU=OFF \  
-DGMX_DOUBLE=ON \  
-DGMX_THREAD_MPI=OFF \  
-DGMX_FFT_LIBRARY=mkl \  
-DMPIEXEC=/opt/intel/impi/5.1.3.181/intel64/bin/mpirun \  
-DREGRESSIONTEST_DOWNLOAD=OFF  
make -j 12  
make install  
cd ..
```