

CNVGRIB Build Instructions

This document contains a set of instructions for building cnvgrib. Download 1.2.29 libpng and 1.2.3 zlib from http://sourceforge.net/project/showfiles.php?group_id=5624

There is a bug in the 1.700.x version of jasper. Use Jasper 1.900.1 instead. Get it from <http://www.ece.uvic.ca/~mdadams/jasper/#download>

Compile the zlib, jasper, libpng libraries. In the configure process, administrators use “/usr” and developers will most likely use “/usr/local” or “\$HOME”. Linux administrators will use RPMs and most likely install zlib and libpng from the RPMs. That ensures that all dependencies are kept intact. The instructions below specify “/usr/local”.

Zlib: see http://sourceforge.net/project/showfiles.php?group_id=5624
./configure --prefix=/usr/local
vi +36 makefile
add “ruv” after ar
exit vi
make
make install

Libpng: see http://sourceforge.net/project/showfiles.php?group_id=5624
./configure --prefix=/usr/local
make
make install

Jasper: see <http://www.ece.uvic.ca/%7Emdadams/jasper/#download>
LDFLAGS="-L/usr/local -lpng -lz"
export LDFLAGS
./configure --prefix=/usr/local
make
make install

If you have trouble, then “unset CFLAGS” and repeat. If you still have problems, run autoconf before running configure and make. If you still have problems, remove the three directories, unset CFLAGS and LDFLAGS, run autoconf, configure, and make.

Download the g2lib tar file from <http://www.nco.ncep.noaa.gov/pmb/codes/GRIB2/> and put it in your top directory and build it.

vi +19 makefile
Change the line to read
INCDIR=-I/usr/local/include
Go to line 36 and edit to specify your platform, see line 6 for options
Go to line 37 and change the compiler to your FORTRAN 90/95 compiler
Go to line 38 and change cc to your C compiler, HP users use gcc if available
For 64 bit compilers, set CFLAGS=-O3 \$(DEFS) \$(INCDIR) -D__64BIT__
cp g2lib.a /usr/local/lib

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Download w3lib from <http://www.nco.ncep.noaa.gov/pmb/codes/GRIB2/> and build it.
vi +21 Makefile, edit the line for your FORTRAN 90/95 compiler
Edit line 23, for your definition based on line 5, Cygwin users use -DLINUX
Edit line 24 for your C compiler, HP use gcc is available
Edit line 25, ARFLAGS = ruv if not already set in your environment
Edit line 66, remove "-ruv"
make
cp libw3.a /usr/local/lib
cp baciof.h clib.h /usr/local/include

Download cnvgrib from <http://www.nco.ncep.noaa.gov/pmb/codes/GRIB2/> and build it.
vi +16 makefile, change compiler to the FORTRAN 90/95 compiler
Edit LDFLAGS =
Edit LIBS = -L/usr/local/lib -lg2 -lw3 -ljasper -lpng -lz
HP users add -IX11
Edit INC = -I. -I/usr/local/include
cp cnvgrib /usr/local/bin

Users who do not have a /usr/local structure that they can update will copy cnvgrib to a directory in their \$PATH.

If you are handy with debugging, compile with the "-g" option and step through the application using a debugger.

Your compiler may need special options. For example, for 64 bit operation the pgi compiler www.csc.fi/english/csc/courses/pgi_compilers requires the "-tp core2-64" option.