

# Kompilacja oprogramowania - Linux

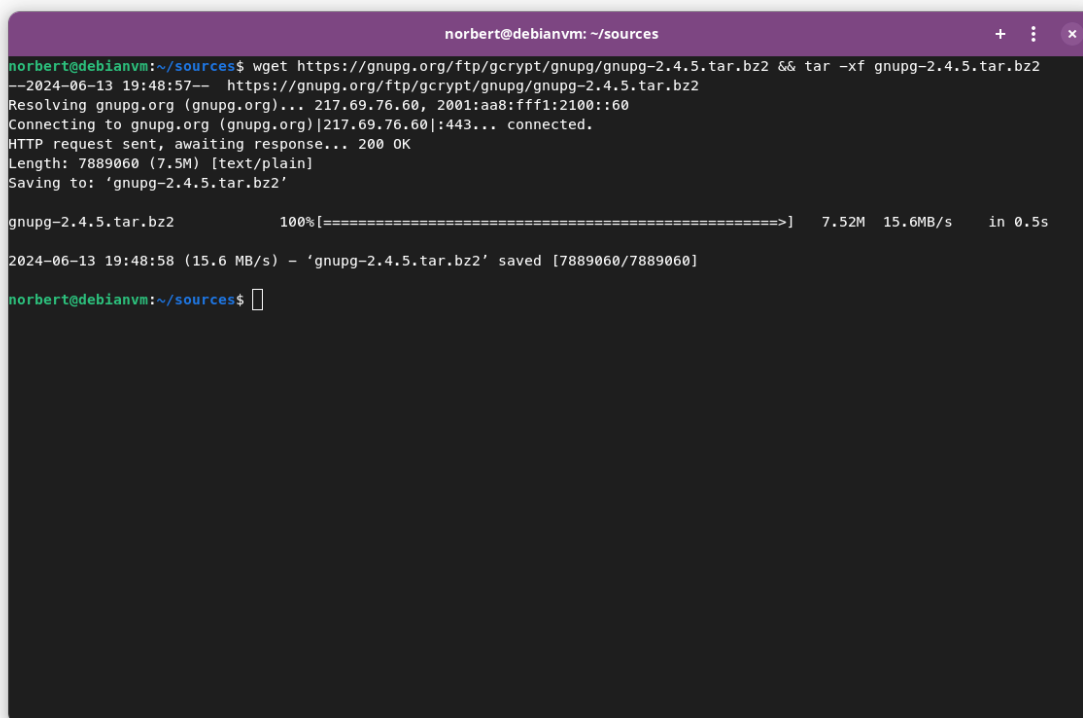
Norbert Budzyński

<https://github.com/CrossCRS/umcs-linux-gnupg>

Środowisko: Czysty Debian 12 + linux-headers-amd64 + build-essential

## GnuPG (GPG)

Otwarta implementacja standardu OpenPGP. Umożliwia tworzenie i zarządzanie kluczami kryptograficznymi, pozwala na szyfrowanie i podpisywanie danych.



```
norbert@debianvm: ~/sources
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/gnupg/gnupg-2.4.5.tar.bz2 && tar -xf gnupg-2.4.5.tar.bz2
--2024-06-13 19:48:57-- https://gnupg.org/ftp/gcrypt/gnupg/gnupg-2.4.5.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7889060 (7.5M) [text/plain]
Saving to: 'gnupg-2.4.5.tar.bz2'

gnupg-2.4.5.tar.bz2      100%[=====>] 7.52M  15.6MB/s  in 0.5s

2024-06-13 19:48:58 (15.6 MB/s) - 'gnupg-2.4.5.tar.bz2' saved [7889060/7889060]

norbert@debianvm:~/sources$
```

Pobieram i rozpakowuję źródła GnuPG 2.4.5

```
norbert@debianvm: ~/sources/gnupg-2.4.5
+ : x

GnuPG is Free Software (meaning that it respects your freedom). It
can be freely used, modified and distributed under the terms of the
GNU General Public License.

* BUILD INSTRUCTIONS

GnuPG 2.4 depends on the following GnuPG related packages:

npth      (https://gnupg.org/ftp/gcrypt/npth/)
libgpg-error (https://gnupg.org/ftp/gcrypt/libgpg-error/)
libgcrypt  (https://gnupg.org/ftp/gcrypt/libgcrypt/)
libksba    (https://gnupg.org/ftp/gcrypt/libksba/)
libassuan  (https://gnupg.org/ftp/gcrypt/libassuan/)

You should get the latest versions of course, the GnuPG configure
script complains if a version is not sufficient.

Several other standard libraries are also required. The configure
script prints diagnostic messages if one of these libraries is not
available and a feature will not be available.

You also need the Pinentry package for most functions of GnuPG;
however it is not a build requirement. Pinentry is available at
https://gnupg.org/ftp/gcrypt/pinentry/ .

After building and installing the above packages in the order as
given above, you may continue with GnuPG installation (you may also
just try to build GnuPG to see whether your already installed
versions are sufficient).

As with all packages, you just have to do

mkdir build
cd build
./configure
```

Sprawdzam wymagane pakiety w README

# nPth

```
norbert@debianvm: ~/sources
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/npth/npth-1.7.tar.bz2 && tar -xvf npth-1.7.tar.bz2
--2024-06-13 19:50:57-- https://gnupg.org/ftp/gcrypt/npth/npth-1.7.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 313213 (306K) [text/plain]
Saving to: 'npth-1.7.tar.bz2'

npth-1.7.tar.bz2      100%[=====] 305.87K  1.67MB/s   in 0.2s

2024-06-13 19:50:58 (1.67 MB/s) - 'npth-1.7.tar.bz2' saved [313213/313213]

norbert@debianvm:~/sources$
```

```
norbert@debianvm: ~/sources/npth-1.7
norbert@debianvm:~/sources/npth-1.7$ ./configure && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether to enable maintainer-specific portions of Makefiles... no
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking whether make supports nested variables... (cached) yes
checking whether make supports the include directive... yes (GNU style)
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
```

```
norbert@debianvm: ~/sources/npth-1.7
/bin/bash ../libtool --tag=CC --mode=link gcc -g -O2 -Wall -Wcast-align -Wshadow -Wstrict-prototypes -Wpointer-arith -no
-install -o t-mutex t-mutex.o ../src/libnpth.la
mv -f .deps/t-thread.Tpo .deps/t-thread.Po
/bin/bash ../libtool --tag=CC --mode=link gcc -g -O2 -Wall -Wcast-align -Wshadow -Wstrict-prototypes -Wpointer-arith -no
-install -o t-thread t-thread.o ../src/libnpth.la
libtool: link: gcc -g -O2 -Wall -Wcast-align -Wshadow -Wstrict-prototypes -Wpointer-arith -o t-mutex t-mutex.o ../src/.libs
/libnpth.so -Wl,-rpath -Wl,/home/norbert/sources/npth-1.7/src/.libs
libtool: link: gcc -g -O2 -Wall -Wcast-align -Wshadow -Wstrict-prototypes -Wpointer-arith -o t-fork t-fork.o ../src/.libs/l
ibnpth.so -Wl,-rpath -Wl,/home/norbert/sources/npth-1.7/src/.libs
libtool: link: gcc -g -O2 -Wall -Wcast-align -Wshadow -Wstrict-prototypes -Wpointer-arith -o t-thread t-thread.o ../src/.li
bs/libnpth.so -Wl,-rpath -Wl,/home/norbert/sources/npth-1.7/src/.libs
make[2]: Leaving directory '/home/norbert/sources/npth-1.7/tests'
make[1]: Entering directory '/home/norbert/sources/npth-1.7'
make[2]: Leaving directory '/home/norbert/sources/npth-1.7'
make[1]: Leaving directory '/home/norbert/sources/npth-1.7'
Making check in src
make[1]: Entering directory '/home/norbert/sources/npth-1.7/src'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/npth-1.7/src'
Making check in tests
make[1]: Entering directory '/home/norbert/sources/npth-1.7/tests'
make check-TESTS
make[2]: Entering directory '/home/norbert/sources/npth-1.7/tests'
PASS: t-mutex
PASS: t-thread
PASS: t-fork
=====
All 3 tests passed
=====
make[2]: Leaving directory '/home/norbert/sources/npth-1.7/tests'
make[1]: Leaving directory '/home/norbert/sources/npth-1.7/tests'
make[1]: Entering directory '/home/norbert/sources/npth-1.7'
make[1]: Leaving directory '/home/norbert/sources/npth-1.7'
norbert@debianvm:~/sources/npth-1.7$
```

```
norbert@debianvm: ~/sources/npth-1.7
norbert@debianvm:~/sources/npth-1.7$ sudo make install
[sudo] password for norbert:
Making install in src
make[1]: Entering directory '/home/norbert/sources/npth-1.7/src'
make[2]: Entering directory '/home/norbert/sources/npth-1.7/src'
/usr/bin/mkdir -p '/usr/local/lib'
/bin/bash ../libtool --mode=install /usr/bin/install -c libnpth.la '/usr/local/lib'
libtool: install: /usr/bin/install -c .libs/libnpth.so.0.2.0 /usr/local/lib/libnpth.so.0.2.0
libtool: install: (cd /usr/local/lib && { ln -s -f libnpth.so.0.2.0 libnpth.so.0 || { rm -f libnpth.so.0 && ln -s libnpth.so.0.2.0 libnpth.so.0; }; })
libtool: install: (cd /usr/local/lib && { ln -s -f libnpth.so.0.2.0 libnpth.so || { rm -f libnpth.so && ln -s libnpth.so.0.2.0 libnpth.so; }; })
libtool: install: /usr/bin/install -c .libs/libnpth.lai /usr/local/lib/libnpth.la
libtool: finish: PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin" ldconfig -n /usr/local/lib

Libraries have been installed in:
  /usr/local/lib

If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the '-LLIBDIR'
flag during linking and do at least one of the following:
  - add LIBDIR to the 'LD_LIBRARY_PATH' environment variable
    during execution
  - add LIBDIR to the 'LD_RUN_PATH' environment variable
    during linking
  - use the '-Wl,-rpath -Wl,LIBDIR' linker flag
  - have your system administrator add LIBDIR to '/etc/ld.so.conf'

See any operating system documentation about shared libraries for
more information, such as the ld(1) and ld.so(8) manual pages.

-----
/usr/bin/mkdir -p '/usr/local/include'
/usr/bin/install -c -m 644 npth.h '/usr/local/include'
```

```
norbert@debianvm: ~/sources/npth-1.7
If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the '-LLIBDIR'
flag during linking and do at least one of the following:
  - add LIBDIR to the 'LD_LIBRARY_PATH' environment variable
    during execution
  - add LIBDIR to the 'LD_RUN_PATH' environment variable
    during linking
  - use the '-Wl,-rpath -Wl,LIBDIR' linker flag
  - have your system administrator add LIBDIR to '/etc/ld.so.conf'

See any operating system documentation about shared libraries for
more information, such as the ld(1) and ld.so(8) manual pages.

-----
/usr/bin/mkdir -p '/usr/local/include'
/usr/bin/install -c -m 644 npth.h '/usr/local/include'
make[2]: Leaving directory '/home/norbert/sources/npth-1.7/src'
make[1]: Leaving directory '/home/norbert/sources/npth-1.7/src'
Making install in tests
make[1]: Entering directory '/home/norbert/sources/npth-1.7/tests'
make[2]: Entering directory '/home/norbert/sources/npth-1.7/tests'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/npth-1.7/tests'
make[1]: Leaving directory '/home/norbert/sources/npth-1.7/tests'
make[1]: Entering directory '/home/norbert/sources/npth-1.7'
make[2]: Entering directory '/home/norbert/sources/npth-1.7'
/usr/bin/mkdir -p '/usr/local/share/aclocal'
/usr/bin/install -c -m 644 npth.m4 '/usr/local/share/aclocal'
/usr/bin/mkdir -p '/usr/local/lib/pkgconfig'
/usr/bin/install -c -m 644 npth.pc '/usr/local/lib/pkgconfig'
make[2]: Leaving directory '/home/norbert/sources/npth-1.7'
make[1]: Leaving directory '/home/norbert/sources/npth-1.7'
norbert@debianvm:~/sources/npth-1.7$
```

# libgpg-error

```
norbert@debianvm: ~/sources/libgpg-error-1.49
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/libgpg-error/libgpg-error-1.49.tar.bz2 && tar -xf libgpg-error-1.49.tar.bz2
--2024-06-13 19:52:49-- https://gnupg.org/ftp/gcrypt/libgpg-error/libgpg-error-1.49.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1081175 (1.0M) [text/plain]
Saving to: 'libgpg-error-1.49.tar.bz2'

libgpg-error-1.49.tar.bz2      100%[=====] 1.03M  3.66MB/s  in 0.3s

2024-06-13 19:52:50 (3.66 MB/s) - 'libgpg-error-1.49.tar.bz2' saved [1081175/1081175]

norbert@debianvm:~/sources$ cd libgpg-error-1.49/
norbert@debianvm:~/sources/libgpg-error-1.49$
```

```
norbert@debianvm: ~/sources/libgpg-error-1.49
norbert@debianvm:~/sources/libgpg-error-1.49$ ./configure && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether to enable maintainer-specific portions of Makefiles... no
checking whether make supports nested variables... (cached) yes
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
configure: autobuild project... libgpg-error
configure: autobuild revision... 1.49
configure: autobuild hostname... debianvm
configure: autobuild timestamp... 20240613T175302Z
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether the compiler supports GNU C... yes
checking whether gcc accepts -g... 
```

norbert@debianvm: ~/sources/libgpg-error-1.49

```
end of user config
current conffile='[cmdline]'
Options:
  verbose=1
  street='Mühlenstraße'
  a-long-one=1
  echo=1
PASS: t-argparse
PASS: t-logging
PASS: t-stringutils
PASS: t-malloc
PASS: t-lock-single-posix
=====
All 12 tests passed
=====
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/tests'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/tests'
Making check in po
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49/po'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/po'
Making check in lang
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang'
Making check in cl
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang/cl'
make[2]: Nothing to be done for 'check'.
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang/cl'
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[2]: Nothing to be done for 'check-am'.
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49'
norbert@debianvm:~/sources/libgpg-error-1.49$
```

```
norbert@debianvm: ~/sources/libgpg-error-1.49
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49'
norbert@debianvm:~/sources/libgpg-error-1.49$ sudo make install
Making install in m4
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49/m4'
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49/m4'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/m4'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/m4'
Making install in src
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49/src'
make install-am
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49/src'
make[3]: Entering directory '/home/norbert/sources/libgpg-error-1.49/src'
  /usr/bin/mkdir -p '/usr/local/lib'
  /bin/bash ../libtool --mode=install /usr/bin/install -c libgpg-error.la '/usr/local/lib'
libtool: install: /usr/bin/install -c .libs/libgpg-error.so.0.36.0 /usr/local/lib/libgpg-error.so.0.36.0
libtool: install: (cd /usr/local/lib && { ln -s -f libgpg-error.so.0.36.0 libgpg-error.so.0 || { rm -f libgpg-error.so.0 &&
ln -s libgpg-error.so.0.36.0 libgpg-error.so.0; }; })
libtool: install: (cd /usr/local/lib && { ln -s -f libgpg-error.so.0.36.0 libgpg-error.so || { rm -f libgpg-error.so && ln -s
libgpg-error.so.0.36.0 libgpg-error.so; }; })
libtool: install: /usr/bin/install -c .libs/libgpg-error.lai /usr/local/lib/libgpg-error.la
libtool: finish: PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin" ldconfig -n /usr/local/lib

-----
Libraries have been installed in:
  /usr/local/lib

If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the '-LLIBDIR'
flag during linking and do at least one of the following:
  - add LIBDIR to the 'LD_LIBRARY_PATH' environment variable
    during execution
```

```
norbert@debianvm: ~/sources/libgpg-error-1.49
done; \
else \
: ; \
fi
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/po'
Making install in lang
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang'
Making install in cl
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang/cl'
make[3]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang/cl'
make[3]: Nothing to be done for 'install-exec-am'.
  /usr/bin/mkdir -p '/usr/local/share/common-lisp/source/gpg-error'
  /usr/bin/install -c -m 644 gpg-error.asd gpg-error-package.lisp gpg-error.lisp '/usr/local/share/common-lisp/source/gpg-error'
  /usr/bin/mkdir -p '/usr/local/share/common-lisp/source/gpg-error'
  /usr/bin/install -c -m 644 gpg-error-codes.lisp '/usr/local/share/common-lisp/source/gpg-error'
make[3]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang/cl'
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang/cl'
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[3]: Entering directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[3]: Nothing to be done for 'install-exec-am'.
make[3]: Nothing to be done for 'install-data-am'.
make[3]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49/lang'
make[1]: Entering directory '/home/norbert/sources/libgpg-error-1.49'
make[2]: Entering directory '/home/norbert/sources/libgpg-error-1.49'
make[2]: Nothing to be done for 'install-exec-am'.
make install-data-hook
make[3]: Entering directory '/home/norbert/sources/libgpg-error-1.49'
make[3]: Nothing to be done for 'install-data-hook'.
make[3]: Leaving directory '/home/norbert/sources/libgpg-error-1.49'
make[2]: Leaving directory '/home/norbert/sources/libgpg-error-1.49'
make[1]: Leaving directory '/home/norbert/sources/libgpg-error-1.49'
```



# libgcrypt

```
norbert@debianvm: ~/sources/libgcrypt-1.10.3
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/libgcrypt/libgcrypt-1.10.3.tar.bz2 && tar -xf libgcrypt-1.10.3
tar.bz2
--2024-06-13 19:55:56-- https://gnupg.org/ftp/gcrypt/libgcrypt/libgcrypt-1.10.3.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3783827 (3.6M) [text/plain]
Saving to: 'libgcrypt-1.10.3.tar.bz2'

libgcrypt-1.10.3.tar.bz2      100%[=====] 3.61M  7.76MB/s  in 0.5s

2024-06-13 19:55:57 (7.76 MB/s) - 'libgcrypt-1.10.3.tar.bz2' saved [3783827/3783827]

norbert@debianvm:~/sources$ cd libgcrypt-1.10.3/
norbert@debianvm:~/sources/libgcrypt-1.10.3$
```

```
norbert@debianvm: ~/sources/libgcrypt-1.10.3
norbert@debianvm:~/sources/libgcrypt-1.10.3$ ./configure && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking whether to enable maintainer-specific portions of Makefiles... no
checking whether make supports nested variables... (cached) yes
checking whether make supports the include directive... yes (GNU style)
checking for gcc... gcc
checking whether the C compiler works... █
```

```
norbert@debianvm: ~/sources/libgcrpy-1.10.3
verify |      1225285      -
=
NIST-P384 | nanosecs/iter  cycles/iter
mult |      1166835      -
keygen |      7052201      -
sign |      2943316      -
verify |      2135235      -
=
NIST-P521 | nanosecs/iter  cycles/iter
mult |      2415270      -
keygen |     15812830      -
sign |      4573512      -
verify |      4167611      -
=
secp256k1 | nanosecs/iter  cycles/iter
mult |        736158      -
=
brainpoolP256r1 | nanosecs/iter  cycles/iter
mult |      1080524      -
keygen |      6750548      -
sign |      2210798      -
verify |      2577635      -
=
PASS: bench-slope
SKIP: hashtest-256g
=====
All 34 tests passed
(1 test was not run)
=====
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3'
norbert@debianvm:~/sources/libgcrpy-1.10.3$
```

```
norbert@debianvm: ~/sources/libgcrpy-1.10.3
All 34 tests passed
(1 test was not run)
=====
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3'
norbert@debianvm:~/sources/libgcrpy-1.10.3$ sudo make install
Making install in compat
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/compat'
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/compat'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/compat'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/compat'
Making install in mpi
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/mpi'
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/mpi'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/mpi'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/mpi'
Making install in cipher
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/cipher'
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/cipher'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/cipher'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/cipher'
Making install in random
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/random'
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/random'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/random'
```

```
norbert@debianvm: ~/sources/libgcrpy-1.10.3
/usr/bin/install -c -m 644 libgcrpy.m4 '/usr/local/share/aclocal'
/usr/bin/mkdir -p '/usr/local/include'
/usr/bin/install -c -m 644 gcrpy.h '/usr/local/include'
/usr/bin/mkdir -p '/usr/local/lib/pkgconfig'
/usr/bin/install -c -m 644 libgcrpy.pc '/usr/local/lib/pkgconfig'
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/src'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/src'
Making install in doc
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/doc'
make install-am
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/doc'
make[3]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/doc'
make[3]: Nothing to be done for 'install-exec-am'.
/usr/bin/mkdir -p '/usr/local/share/info'
/usr/bin/install -c -m 644 ./gcrpy.info ./gcrpy.info-1 ./gcrpy.info-2 '/usr/local/share/info'
/usr/bin/mkdir -p '/usr/local/share/man/man1'
/usr/bin/install -c -m 644 hmac256.1 '/usr/local/share/man/man1'
make[3]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/doc'
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/doc'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/doc'
Making install in tests
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3/tests'
make[1]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3'
make[2]: Entering directory '/home/norbert/sources/libgcrpy-1.10.3'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3'
make[1]: Leaving directory '/home/norbert/sources/libgcrpy-1.10.3'
norbert@debianvm:~/sources/libgcrpy-1.10.3$
```

# libksba

```
norbert@debianvm: ~/sources/libksba-1.6.6
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/libksba/libksba-1.6.6.tar.bz2 && tar -xf libksba-1.6.6.tar.bz2
--2024-06-13 19:59:09-- https://gnupg.org/ftp/gcrypt/libksba/libksba-1.6.6.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 708510 (692K) [text/plain]
Saving to: 'libksba-1.6.6.tar.bz2'

libksba-1.6.6.tar.bz2      100%[=====] 691.90K  2.84MB/s   in 0.2s

2024-06-13 19:59:09 (2.84 MB/s) - 'libksba-1.6.6.tar.bz2' saved [708510/708510]

norbert@debianvm:~/sources$ cd libksba-1.6.6/
norbert@debianvm:~/sources/libksba-1.6.6$
```

```
norbert@debianvm: ~/sources/libksba-1.6.6
norbert@debianvm:~/sources/libksba-1.6.6$ ./configure && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
configure: autobuild project... libksba
configure: autobuild revision... 1.6.6
configure: autobuild hostname... debianvm
configure: autobuild timestamp... 20240613-195923
checking whether make supports the include directive... 
```

```
norbert@debianvm: ~/sources/libksba-1.6.6
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/gl'
Making check in src
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/src'
make check-am
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/src'
make[2]: Nothing to be done for 'check-am'.
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/src'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/src'
Making check in tests
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/tests'
make check-am
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/tests'
make check-TESTS
make[3]: Entering directory '/home/norbert/sources/libksba-1.6.6/tests'
PASS: cert-basic
PASS: t-crl-parser
PASS: t-dnparser
PASS: t-oid
PASS: t-reader
PASS: t-cms-parser
PASS: t-der-builder
=====
All 7 tests passed
=====
make[3]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
Making check in doc
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/doc'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/doc'
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6'
norbert@debianvm:~/sources/libksba-1.6.6$
```

```
norbert@debianvm: ~/sources/libksba-1.6.6

=====
All 7 tests passed
=====
make[3]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
Making check in doc
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/doc'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/doc'
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6'
norbert@debianvm:~/sources/libksba-1.6.6$ sudo make install
Making install in m4
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/m4'
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/m4'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/m4'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/m4'
Making install in gl
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/gl'
make install-am
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/gl'
make[3]: Entering directory '/home/norbert/sources/libksba-1.6.6/gl'
make[3]: Nothing to be done for 'install-exec-am'.
make[3]: Nothing to be done for 'install-data-am'.
make[3]: Leaving directory '/home/norbert/sources/libksba-1.6.6/gl'
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/gl'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/gl'
Making install in src
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/src'
make install-am
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/src'
```

```
norbert@debianvm: ~/sources/libksba-1.6.6

/usr/bin/mkdir -p '/usr/local/share/aclocal'
/usr/bin/install -c -m 644 ksba.m4 '/usr/local/share/aclocal'
/usr/bin/mkdir -p '/usr/local/include'
/usr/bin/install -c -m 644 ksba.h '/usr/local/include'
/usr/bin/mkdir -p '/usr/local/lib/pkgconfig'
/usr/bin/install -c -m 644 ksba.pc '/usr/local/lib/pkgconfig'
make[3]: Leaving directory '/home/norbert/sources/libksba-1.6.6/src'
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/src'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/src'
Making install in tests
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/tests'
make install-am
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/tests'
make[3]: Entering directory '/home/norbert/sources/libksba-1.6.6/tests'
make[3]: Nothing to be done for 'install-exec-am'.
make[3]: Nothing to be done for 'install-data-am'.
make[3]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/tests'
Making install in doc
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6/doc'
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6/doc'
make[2]: Nothing to be done for 'install-exec-am'.
/usr/bin/mkdir -p '/usr/local/share/info'
/usr/bin/install -c -m 644 ./ksba.info '/usr/local/share/info'
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6/doc'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6/doc'
make[1]: Entering directory '/home/norbert/sources/libksba-1.6.6'
make[2]: Entering directory '/home/norbert/sources/libksba-1.6.6'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libksba-1.6.6'
make[1]: Leaving directory '/home/norbert/sources/libksba-1.6.6'
norbert@debianvm:~/sources/libksba-1.6.6$
```

# libassuan

```
norbert@debianvm: ~/sources/libassuan-2.5.7
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/libassuan/libassuan-2.5.7.tar.bz2 && tar -xf libassuan-2.5.7.t
ar.bz2
--2024-06-13 20:00:11-- https://gnupg.org/ftp/gcrypt/libassuan/libassuan-2.5.7.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 605076 (591K) [text/plain]
Saving to: 'libassuan-2.5.7.tar.bz2'

libassuan-2.5.7.tar.bz2      100%[=====] 590.89K  2.53MB/s   in 0.2s

2024-06-13 20:00:11 (2.53 MB/s) - 'libassuan-2.5.7.tar.bz2' saved [605076/605076]

norbert@debianvm:~/sources$ cd libassuan-2.5.7/
norbert@debianvm:~/sources/libassuan-2.5.7$
```

```
norbert@debianvm: ~/sources/libassuan-2.5.7
norbert@debianvm:~/sources/libassuan-2.5.7$ ./configure && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether to enable maintainer-specific portions of Makefiles... no
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking whether make supports nested variables... (cached) yes
configure: autobuild project... libassuan
configure: autobuild revision... 2.5.7
configure: autobuild hostname... debianvm
configure: autobuild timestamp... 20240613-200024
checking whether make supports the include directive... yes (GNU style)
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables... 
```

```
norbert@debianvm: ~/sources/libassuan-2.5.7
fdpassing[45096]: chan_4 <- ECHO
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- # descriptor 4 is in flight
fdpassing[45096]: chan_4 <- INPUT FD
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- ECHO
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- # descriptor 4 is in flight
fdpassing[45096]: chan_4 <- INPUT FD
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- ECHO
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- # descriptor 4 is in flight
fdpassing[45096]: chan_4 <- INPUT FD
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- ECHO
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- # descriptor 4 is in flight
fdpassing[45096]: chan_4 <- INPUT FD
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- ECHO
fdpassing[45096]: chan_4 -> OK
fdpassing[45096]: chan_4 <- BYE
fdpassing[45096]: chan_4 -> OK closing connection
PASS: fdpassing
=====
All 3 tests passed
=====
make[3]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7'
norbert@debianvm:~/sources/libassuan-2.5.7$
```



```
norbert@debianvm: ~/sources/libassuan-2.5.7
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7'
norbert@debianvm:~/sources/libassuan-2.5.7$ sudo make install
Making install in m4
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7/m4'
make[2]: Entering directory '/home/norbert/sources/libassuan-2.5.7/m4'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/m4'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/m4'
Making install in src
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7/src'
make install-am
make[2]: Entering directory '/home/norbert/sources/libassuan-2.5.7/src'
make[3]: Entering directory '/home/norbert/sources/libassuan-2.5.7/src'
  /usr/bin/mkdir -p '/usr/local/lib'
  /bin/bash ../libtool --mode=install /usr/bin/install -c libassuan.la '/usr/local/lib'
libtool: install: /usr/bin/install -c .libs/libassuan.so.0.0.8.7 /usr/local/lib/libassuan.so.0.0.8.7
libtool: install: (cd /usr/local/lib && { ln -s -f libassuan.so.0.0.8.7 libassuan.so.0 || { rm -f libassuan.so.0 && ln -s libassuan.so.0.0.8.7 libassuan.so.0; }; })
libtool: install: (cd /usr/local/lib && { ln -s -f libassuan.so.0.0.8.7 libassuan.so || { rm -f libassuan.so && ln -s libassuan.so.0.0.8.7 libassuan.so; }; })
libtool: install: /usr/bin/install -c .libs/libassuan.lai /usr/local/lib/libassuan.la
libtool: finish: PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin" ldconfig -n /usr/local/lib
-----
Libraries have been installed in:
  /usr/local/lib

If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the '-LLIBDIR'
flag during linking and do at least one of the following:
```

```
norbert@debianvm: ~/sources/libassuan-2.5.7
/usr/bin/mkdir -p '/usr/local/share/aclocal'
/usr/bin/install -c -m 644 libassuan.m4 '/usr/local/share/aclocal'
/usr/bin/mkdir -p '/usr/local/include'
/usr/bin/install -c -m 644 assuan.h '/usr/local/include'
/usr/bin/mkdir -p '/usr/local/lib/pkgconfig'
/usr/bin/install -c -m 644 libassuan.pc '/usr/local/lib/pkgconfig'
make[3]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/src'
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/src'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/src'
Making install in doc
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7/doc'
make[2]: Entering directory '/home/norbert/sources/libassuan-2.5.7/doc'
make[2]: Nothing to be done for 'install-exec-am'.
  /usr/bin/mkdir -p '/usr/local/share/info'
  /usr/bin/install -c -m 644 ./assuan.info '/usr/local/share/info'
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/doc'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/doc'
Making install in tests
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7/tests'
make install-am
make[2]: Entering directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[3]: Entering directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[3]: Nothing to be done for 'install-exec-am'.
make[3]: Nothing to be done for 'install-data-am'.
make[3]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7/tests'
make[1]: Entering directory '/home/norbert/sources/libassuan-2.5.7'
make[2]: Entering directory '/home/norbert/sources/libassuan-2.5.7'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/libassuan-2.5.7'
make[1]: Leaving directory '/home/norbert/sources/libassuan-2.5.7'
norbert@debianvm:~/sources/libassuan-2.5.7$
```

pinentry

```
norbert@debianvm: ~/sources/pinentry-1.3.0
norbert@debianvm:~/sources$ wget https://gnupg.org/ftp/gcrypt/pinentry/pinentry-1.3.0.tar.bz2 && tar -xf pinentry-1.3.0.tar.bz2
--2024-06-13 20:01:10-- https://gnupg.org/ftp/gcrypt/pinentry/pinentry-1.3.0.tar.bz2
Resolving gnupg.org (gnupg.org)... 217.69.76.60, 2001:aa8:fff1:2100::60
Connecting to gnupg.org (gnupg.org)|217.69.76.60|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 610363 (596K) [text/plain]
Saving to: 'pinentry-1.3.0.tar.bz2'

pinentry-1.3.0.tar.bz2      100%[=====>] 596.06K  2.55MB/s   in 0.2s

2024-06-13 20:01:11 (2.55 MB/s) - 'pinentry-1.3.0.tar.bz2' saved [610363/610363]

norbert@debianvm:~/sources$ cd pinentry-1.3.0/
norbert@debianvm:~/sources/pinentry-1.3.0$
```

```
norbert@debianvm: ~/sources/pinentry-1.3.0
norbert@debianvm:~/sources/pinentry-1.3.0$ ./configure && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether make supports the include directive... yes (GNU style)
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether the compiler supports GNU C... yes
checking whether gcc accepts -g... yes
checking for gcc option to enable C11 features... none needed
checking whether gcc understands -c and -o together... yes
checking dependency style of gcc... 
```

```
norbert@debianvm: ~/sources/pinentry-1.3.0
checking for gpg-error-config... no
checking for gpgmt-config... /usr/local/bin/gpgmt-config
configure: Use gpgmt-config with /usr/local/lib as gpg-error-config
checking for GPG Error - version >= 1.16... yes (1.49)
configure: Use gpgmt-config as libassuan-config
checking for LIBASSUAN - version >= 2.1.0... yes (2.5.7)
checking LIBASSUAN API version... okay
checking for byte... no
checking for ulong... yes
checking for u64... no
checking for ncursesw... checking for ncurses... checking for initscr in -lncursesw... no
checking for initscr in -lncurses... no
checking for tgetent in -lncurses... no
checking for tgetent in -ltermcap... no
checking for tgetent in -ltermLib... no
checking for initscr in -lncurses... no
checking if Unix domain socket is supported... yes
checking for elementary >= 1.18,ecore-x... configure: WARNING: pkg-config could not find the modules elementary or ecore-x
checking for gtk+-2.0 >= 2.12.0... configure: WARNING: pkg-config could not find the module gtk+-2.0
checking for gcr-4... checking for gcr-base-3... configure: WARNING: pkg-config could not find the module gcr-4 or gcr-base-3
checking for libsecret-1... configure: WARNING: pkg-config could not find the module libsecret-1
checking for x11... configure: WARNING: pkg-config could not find the module x11
checking for KF5WaylandClient >= 5.60... configure: WARNING: pkg-config could not find the module KF5WaylandClient
checking for KF6GuiAddons >= 5.240... configure: WARNING: pkg-config could not find the module KF6GuiAddons
checking for Qt5Core >= 5.0.0 Qt5Gui >= 5.0.0 Qt5Widgets >= 5.0.0... ./configure: line 12171: : command not found
configure: WARNING: pinentry-qt5 will be built without Caps Lock warning on Wayland
checking for Qt6Core >= 6.4.0 Qt6Gui >= 6.4.0 Qt6Widgets >= 6.4.0... checking for Qt6Test >= 6.4.0... configure: WARNING: pinentry-qt will be built without Caps Lock warning on Unix
configure: WARNING: pinentry-qt will be built without window parenting on wayland
checking for QtCore >= 4.6.0 QtGui >= 4.6.0... checking for fltk-config... no
configure: WARNING: fltk-config is not found
configure: error: No pinentry enabled.
norbert@debianvm:~/sources/pinentry-1.3.0$
```

Wybieram pinentry dla ncurses, więc instaluję ncurses i ponawiam konfigurację

```
norbert@debianvm: ~/sources/pinentry-1.3.0
norbert@debianvm:~/sources/pinentry-1.3.0$ sudo apt install libncurses-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  ncurses-doc
The following NEW packages will be installed:
  libncurses-dev
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 349 kB of archives.
After this operation, 2,375 kB of additional disk space will be used.
Get:1 http://deb.debian.org/debian bookworm/main amd64 libncurses-dev amd64 6.4-4 [349 kB]
Fetched 349 kB in 0s (1,576 kB/s)
Selecting previously unselected package libncurses-dev:amd64.
(Reading database ... 138586 files and directories currently installed.)
Preparing to unpack .../libncurses-dev_6.4-4_amd64.deb ...
Unpacking libncurses-dev:amd64 (6.4-4) ...
Setting up libncurses-dev:amd64 (6.4-4) ...
Processing triggers for man-db (2.11.2-2) ...
norbert@debianvm:~/sources/pinentry-1.3.0$ ./configure --enable-pinentry-curses && make -j6 && make check
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a race-free mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether make supports the include directive... yes (GNU style)
checking for gcc... gcc
```

```
norbert@debianvm: ~/sources/pinentry-1.3.0
mv -f .deps/pinentry-curses.Tpo .deps/pinentry-curses.Po
gcc -g -O2 -Wall -Wno-pointer-sign -Wpointer-arith -o pinentry-curses pinentry-curses.o ../pinentry/libpinentry.a ../pinentry/libpinentry-curses.a ../secmem/libsecmem.a -L/usr/local/lib -lassuan -L/usr/local/lib -lgpg-error -lncursesw
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/curses'
Making all in doc
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[2]: Nothing to be done for 'all'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0'
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0'
Making check in m4
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/m4'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/m4'
Making check in secmem
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/secmem'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/secmem'
Making check in pinentry
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
Making check in curses
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/curses'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/curses'
Making check in doc
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0'
norbert@debianvm:~/sources/pinentry-1.3.0$
```

```
norbert@debianvm: ~/sources/pinentry-1.3.0
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/curses'
Making check in doc
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0'
norbert@debianvm:~/sources/pinentry-1.3.0$ sudo make install
Making install in m4
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/m4'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/m4'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/m4'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/m4'
Making install in secmem
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/secmem'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/secmem'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/secmem'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/secmem'
Making install in pinentry
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
Making install in curses
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/curses'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/curses'
/usr/bin/mkdir -p '/usr/local/bin'
/usr/bin/install -c pinentry-curses '/usr/local/bin'
make[2]: Nothing to be done for 'install-data-am'.
```

```
norbert@debianvm: ~/sources/pinentry-1.3.0
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/secmem'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/secmem'
Making install in pinentry
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/pinentry'
Making install in curses
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/curses'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/curses'
/usr/bin/mkdir -p '/usr/local/bin'
/usr/bin/install -c pinentry-curses '/usr/local/bin'
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/curses'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/curses'
Making install in doc
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[2]: Nothing to be done for 'install-exec-am'.
/usr/bin/mkdir -p '/usr/local/share/info'
/usr/bin/install -c -m 644 ./pinentry.info '/usr/local/share/info'
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0/doc'
make[1]: Entering directory '/home/norbert/sources/pinentry-1.3.0'
make[2]: Entering directory '/home/norbert/sources/pinentry-1.3.0'
(cd /usr/local/bin; \
rm -f pinentry; \
ln -s pinentry-curses pinentry)
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/pinentry-1.3.0'
make[1]: Leaving directory '/home/norbert/sources/pinentry-1.3.0'
norbert@debianvm:~/sources/pinentry-1.3.0$
```

# GnuPG

```
norbert@debianvm: ~/sources/gnupg-2.4.5
norbert@debianvm:~/sources/gnupg-2.4.5$ ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
configure: autobuild project... gnupg
configure: autobuild revision... 2.4.5
configure: autobuild hostname... debianvm
configure: autobuild timestamp... 20240613-200512
checking whether make supports the include directive... yes (GNU style)
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... 
```

```
norbert@debianvm: ~/sources/gnupg-2.4.5

GnuPG v2.4.5 has been configured as follows:

Revision: cbff323b3 (52223)
Platform: GNU/Linux (x86_64-pc-linux-gnu)

OpenPGP: yes
S/MIME: yes
Agent: yes
Smartcard: yes (without internal CCID driver)
TPM: no
G13: no
Dirmngr: no
Keyboxd: no
Gpgtar: yes
WKS tools: yes

Protect tool: (default)
LDAP wrapper: (default)
Default agent: (default)
Default pinentry: (default)
Default scdaemon: (default)
Default keyboxd: (default)
Default tpm2daemon: (default)
Default dirmngr: (default)

Dirmngr auto start: yes
Readline support: no
LDAP support: n/a
TLS support: no
TOFU support: no
Tor support: only .onion

norbert@debianvm:~/sources/gnupg-2.4.5$ 
```

```
norbert@debianvm: ~/sources/gnupg-2.4.5
norbert@debianvm:~/sources/gnupg-2.4.5$ make -j6
make all-recursive
make[1]: Entering directory '/home/norbert/sources/gnupg-2.4.5'
Making all in m4
make[2]: Entering directory '/home/norbert/sources/gnupg-2.4.5/m4'
make[2]: Nothing to be done for 'all'.
make[2]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/m4'
Making all in common
make[2]: Entering directory '/home/norbert/sources/gnupg-2.4.5/common'
make all-am

```

```
norbert@debianvm: ~/sources/gnupg-2.4.5
Making all in .
make[3]: Entering directory '/home/norbert/sources/gnupg-2.4.5/tests'
gcc -DHAVE_CONFIG_H -I. -I. -Wall -Wno-format-zero-length -Wno-pointer-sign -Wpointer-arith -g -O2 -MT asschk.o -MD -MP -MF .deps/asschk.Tpo -c -o asschk.o asschk.c
mv -f .deps/asschk.Tpo .deps/asschk.Po
gcc -Wall -Wno-format-zero-length -Wno-pointer-sign -Wpointer-arith -g -O2 -o asschk asschk.o
make[3]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/tests'
make[2]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/tests'
make[2]: Entering directory '/home/norbert/sources/gnupg-2.4.5'
(set -e; cd bin; \
  for i in gpg gpgv; \
  do ln -sf ../g10/$i .; done; \
  for i in gpgsm; \
  do ln -sf ../sm/$i .; done; \
  for i in gpg-agent; \
  do ln -sf ../agent/$i .; done; \
  for i in dirmngr; \
  do ln -sf ../dirmngr/$i .; done; \
  for i in gpgconf gpg-connect-agent gpgtar gpg-card; \
  do ln -sf ../tools/$i .; done; \
  cd ../libexec; \
  for i in keyboxd; \
  do ln -sf ../kbx/$i .; done; \
  for i in scdaemon; \
  do ln -sf ../scd/$i .; done; \
  for i in gpg-preset-passphrase; \
  do ln -sf ../agent/$i .; done; \
  for i in tpm2daemon; \
  do [ -f ../tpm2d/$i ] && ln -sf ../tpm2d/$i .; done; \
  echo "created links to binaries" )
created links to binaries
make[2]: Leaving directory '/home/norbert/sources/gnupg-2.4.5'
make[1]: Leaving directory '/home/norbert/sources/gnupg-2.4.5'
norbert@debianvm:~/sources/gnupg-2.4.5$
```



```
norbert@debianvm: ~/sources/gnupg-2.4.5
norbert@debianvm:~/sources/gnupg-2.4.5$ make check
Making check in m4
make[1]: Entering directory '/home/norbert/sources/gnupg-2.4.5/m4'
make[1]: Nothing to be done for 'check'.
make[1]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/m4'
Making check in common
make[1]: Entering directory '/home/norbert/sources/gnupg-2.4.5/common'
make check-am
make[2]: Entering directory '/home/norbert/sources/gnupg-2.4.5/common'
make check-TESTS
make[3]: Entering directory '/home/norbert/sources/gnupg-2.4.5/common'
PASS: t-stringhelp
PASS: t-timestuff
PASS: t-convert
PASS: t-percent
PASS: t-gettime
PASS: t-sysutils
PASS: t-sexputil
> Known envvars: GPG_TTY(ttyname) TERM(ttytype) DISPLAY(display)
> XAUTHORITY(xauthority) XMODIFIERS WAYLAND_DISPLAY XDG_SESSION_TYPE
> QT_QPA_PLATFORM GTK_IM_MODULE DBUS_SESSION_BUS_ADDRESS
> QT_IM_MODULE INSIDE_EMACS PINENTRY_USER_DATA(pinentry-user-data)
> PINENTRY_GEOM_HINT
PASS: t-session-env
PASS: t-openpgp-oid
PASS: t-ssh-utils
PASS: t-mapstrings
PASS: t-zb32
PASS: t-mbox-util
PASS: t-iobuf
PASS: t-strlist
PASS: t-name-value
PASS: t-ccparray
PASS: t-recsel
```

```
norbert@debianvm: ~/sources/gnupg-2.4.5
Checking msg_2220: designated revoker msg_0 did not properly merge...
Checking import of two keys with colliding long key ids.
PASS: <standard>tests/openpgp/import.scm
Checking key revocation.
PASS: <standard>tests/openpgp/import-revocation-certificate.scm
Preparing for ECC test
Importing ECC public keys
Checking opaque ECDSA signatures
> msg_opaque_signed_256 ("/home/norbert/sources/gnupg-2.4.5/bin/gpg" --output "/tmp/gpgscm-20240613T180721-ecc-Mn1yDL/y"
--verify "/tmp/gpgscm-20240613T180721-ecc-5nCqwg/x") failed: gpg: uncompressing failed: Unknown compression algorithm
gpg: verify signatures failed: Unknown compression algorithm

0: tests.scm:122: (throw (string-append (stringify what) " failed") (:stderr result))
1: ecc.scm:79: (call-check `,(tool 'gpg) --output ,y --verify ,x))
2: init.scm:429: (func (let ((current-ws *active-windings*)) (lambda (x) (set-active-windings! current-ws) (continuation x))
))
3: #<CLOSURE>
4: init.scm:422: (old-c/cc (lambda (continuation) (func (let ((current-ws *active-windings*)) (lambda (x) (set-active-windings!
current-ws) (continuation x))))))
5: (call/cc (lambda (**exit**) (push-handler (lambda *error* (**exit** (begin (remove-temporary-file y) (rethrow *error*))))
) (let ((gensym-50 (begin (begin (call-with-output-file x (lambda (p) (display (eval test (current-environment)) p))) (call-
check `,(tool 'gpg) --output ,y --verify ,x)) (unless (file=? y z) (fail "mismatch"))))) (pop-handler) gensym-50)))
FAIL: <standard>tests/openpgp/ecc.scm
BZIP2 support not compiled in.
SKIP: <standard>tests/openpgp/4gb-packet.scm
Tofu not supported
SKIP: <standard>tests/openpgp/tofu.scm
Checking basic WoT (classic trust model)...
PASS: <standard>tests/openpgp/trust-pgp-1.scm
Checking WoT with trust signatures (PGP trust model)...
PASS: <standard>tests/openpgp/trust-pgp-2.scm
Checking max depth of trust signature chains...
PASS: <standard>tests/openpgp/trust-pgp-3.scm
Checking trust signature with domain restrictions...
PASS: <standard>tests/openpgp/trust-pgp-4.scm
```

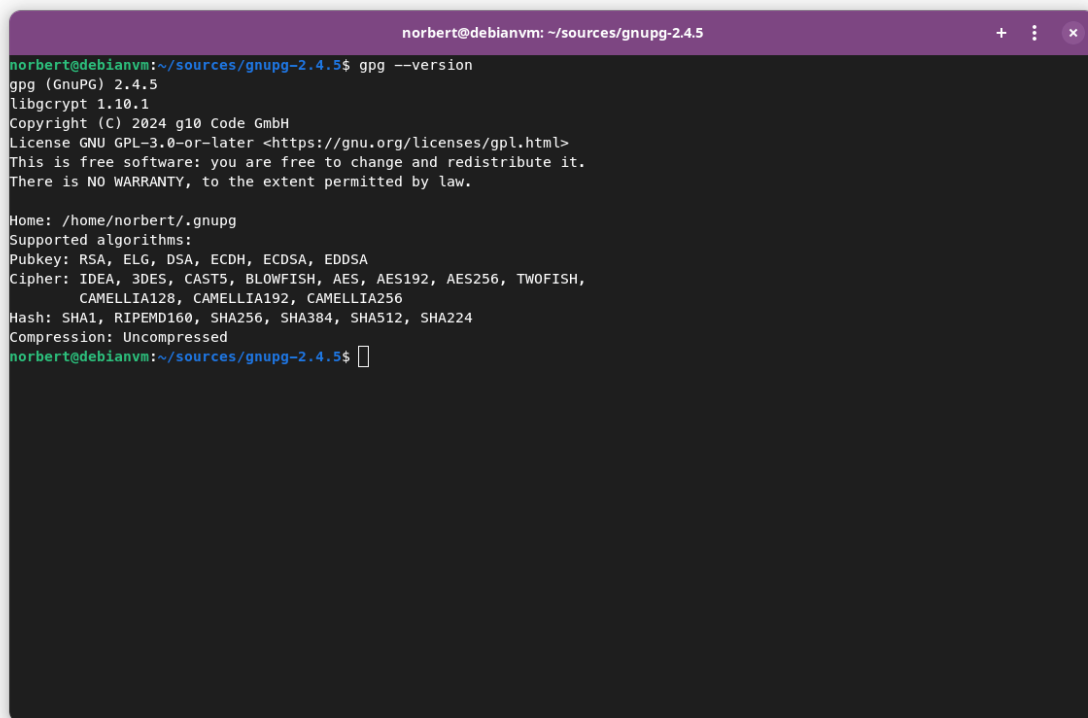
```
norbert@debianvm: ~/sources/gnupg-2.4.5
PASS: <standard>tests/openpgp/quick-key-manipulation.scm
Checking key selection
> 5 4 4 3 4 3 3 2 4 3 3 2 2 1 4 3 3 2 3 2 2 1 3 2 2 1 2 1 1 <
PASS: <standard>tests/openpgp/key-selection.scm
PASS: <standard>tests/openpgp/delete-keys.scm
Checking reading and writing configuration via gpgconf...
> compliance ..... verbose ..... quiet ..... <
PASS: <standard>tests/openpgp/gpgconf.scm
Checking passphrase cache (issue2015)...
PASS: <standard>tests/openpgp/issue2015.scm
Checking import statistics (issue2346)...
PASS: <standard>tests/openpgp/issue2346.scm
Checking robustness wrt empty databases in gnupghome (issue2417)...
PASS: <standard>tests/openpgp/issue2417.scm
Checking iobuf_peek corner case (issue2419)...
PASS: <standard>tests/openpgp/issue2419.scm
Tofu not supported
SKIP: <standard>tests/openpgp/issue2929.scm
Checking invocation with invalid file descriptors (issue2941).
> status-fd attribute-fd logger-fd override-session-key-fd passphrase-fd command-fd <
PASS: <standard>tests/openpgp/issue2941.scm
=====
62 tests run, 48 succeeded, 11 failed, 0 failed unexpectedly, 3 skipped.
Failed tests: tests/openpgp/ecc.scm tests/openpgp/armor.scm tests/openpgp/gpgv.scm tests/openpgp/verify-multifile.scm tests/
openpgp/verify.scm tests/openpgp/signencrypt.scm tests/openpgp/decrypt-unwrap-verify.scm tests/openpgp/decrypt-session-key.s
cm tests/openpgp/decrypt-dsa.scm tests/openpgp/decrypt-multifile.scm tests/openpgp/decrypt.scm
Skipped tests: tests/openpgp/issue2929.scm tests/openpgp/tofu.scm tests/openpgp/4gb-packet.scm
=====
make[2]: *** [Makefile:975: xcheck] Error 11
make[2]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/tests/openpgp'
make[1]: *** [Makefile:516: check-recursive] Error 1
make[1]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/tests'
make: *** [Makefile:631: check-recursive] Error 1
norbert@debianvm: ~/sources/gnupg-2.4.5$
```

Niektóre testy nie przeszły, prawdopodobnie przez niewkompilowane opcjonalne funkcjonalności?

```
norbert@debianvm: ~/sources/gnupg-2.4.5
norbert@debianvm:~/sources/gnupg-2.4.5$ sudo make install
Making install in m4
make[1]: Entering directory '/home/norbert/sources/gnupg-2.4.5/m4'
make[2]: Entering directory '/home/norbert/sources/gnupg-2.4.5/m4'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/m4'
make[1]: Leaving directory '/home/norbert/sources/gnupg-2.4.5/m4'
Making install in common

```

```
norbert@debianvm: ~/sources/gnupg-2.4.5
make[1]: Entering directory '/home/norbert/sources/gnupg-2.4.5'
(set -e; cd bin; \
for i in gpg gpgv; \
do ln -sf ../g10/$i .; done; \
for i in gpgsm; \
do ln -sf ../sm/$i .; done; \
for i in gpg-agent; \
do ln -sf ../agent/$i .; done; \
for i in dirmngr; \
do ln -sf ../dirmngr/$i .; done; \
for i in gpgconf gpg-connect-agent gpgtar gpg-card; \
do ln -sf ../tools/$i .; done; \
cd ../libexec; \
for i in keyboxd; \
do ln -sf ../kbx/$i .; done; \
for i in scdaemon; \
do ln -sf ../scd/$i .; done; \
for i in gpg-preset-passphrase; \
do ln -sf ../agent/$i .; done; \
for i in tpm2daemon; \
do [ -f ../tpm2d/$i ] && ln -sf ../tpm2d/$i .; done; \
echo "created links to binaries" )
created links to binaries
make[2]: Entering directory '/home/norbert/sources/gnupg-2.4.5'
make[2]: Nothing to be done for 'install-exec-am'.
/usr/bin/mkdir -p '/usr/local/share/doc/gnupg'
/usr/bin/install -c -m 644 README '/usr/local/share/doc/gnupg'
make install-data-hook
make[3]: Entering directory '/home/norbert/sources/gnupg-2.4.5'
make[3]: Nothing to be done for 'install-data-hook'.
make[3]: Leaving directory '/home/norbert/sources/gnupg-2.4.5'
make[2]: Leaving directory '/home/norbert/sources/gnupg-2.4.5'
make[1]: Leaving directory '/home/norbert/sources/gnupg-2.4.5'
norbert@debianvm:~/sources/gnupg-2.4.5$
```

A terminal window with a purple title bar containing the text 'norbert@debianvm: ~/sources/gnupg-2.4.5'. The terminal shows the command 'gpg --version' and its output. The output lists the version as 2.4.5, the library as libgcrypt 1.10.1, the copyright as (C) 2024 g10 Code GmbH, and the license as GNU GPL-3.0-or-later. It also lists supported algorithms for public keys, ciphers, hashes, and compression. The prompt 'norbert@debianvm:~/sources/gnupg-2.4.5\$' is shown at the bottom.

```
norbert@debianvm:~/sources/gnupg-2.4.5$ gpg --version
gpg (GnuPG) 2.4.5
libgcrypt 1.10.1
Copyright (C) 2024 g10 Code GmbH
License GNU GPL-3.0-or-later <https://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Home: /home/norbert/.gnupg
Supported algorithms:
Pubkey: RSA, ELG, DSA, ECDH, ECDSA, EDDSA
Cipher: IDEA, 3DES, CAST5, BLOWFISH, AES, AES192, AES256, TWOFISH,
        CAMELLIA128, CAMELLIA192, CAMELLIA256
Hash: SHA1, RIPEMD160, SHA256, SHA384, SHA512, SHA224
Compression: Uncompressed
norbert@debianvm:~/sources/gnupg-2.4.5$
```

Wszystko przebiegło pomyślnie. Kompilacja z tarballi była bezproblemowa, README były zrozumiale napisane.

Początkowo próbowałem użyć źródeł z git'a, ale mimo pobierania stabilnych wersji przez tagi niektóre pakiety miały problem ze znalezieniem innych już zainstalowanych pakietów.