

LFS

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Chapitre 1

Mise en place d'une LFS

1.1 Introduction

Le but de cette doc est de décrire les différentes étapes exécutées pour la mise en place d'un système LFS. Si tout va bien à la fin de cette documentation on aura un OS¹ from scratch utilisable !

1.2 Booter un livecd

Pour information j'ai pris le livecd system rescue cd.

1.3 Création des partitions

On peut utiliser soit la commande **fdisk** ou bien **cdisk** pour créer les partitions. Un minimum de deux partitions sont nécessaires :

- une partition ext3 = /dev/sda1
- une partition swap = /dev/sda2

1.4 Formater les partitions

Pour la racine du système : **mke2fs -v -j /dev/sda1**.
Pour la partition swap : **mkswap /dev/sda2**

1.5 Monter les partitions

```
1 export LFS=/mnt/lfs
2 mkdir -pv $LFS
3 mount -v -t ext3 /dev/sda1 $LFS
4 swapon -v /dev/sda2
```

1.6 Télécharger les sources

```
1 mkdir -v $LFS/sources
2 chmod -v a+wt $LFS/sources
3 cd $LFS/sources
4 wget http://ftp.gnu.org/gnu/autoconf/autoconf-2.68.tar.bz2
5 wget http://ftp.gnu.org/gnu/automake/automake-1.11.tar.bz2
6 wget http://ftp.gnu.org/gnu/bash/bash-4.2.tar.gz
7 wget http://ftp.gnu.org/gnu/binutils/binutils-2.21.tar.bz2
8 wget http://ftp.gnu.org/gnu/bison/bison-2.4.3.tar.bz2
9 wget http://www.bzip.org/1.0.6/bzip2-1.0.6.tar.gz
10 wget http://ftp.gnu.org/gnu/coreutils/coreutils-8.10.tar.gz
11 wget http://ftp.gnu.org/gnu/dejagnu/dejagnu-1.4.4.tar.gz
```

1. Operating System

```

12 wget http://ftp.gnu.org/gnu/diffutils/diffutils-3.0.tar.gz
13 wget http://prdownloads.sf.net/e2fsprogs/e2fsprogs-1.41.14.tar.gz
14 wget http://prdownloads.sf.net/expect/expect5.45.tar.gz
15 wget ftp://ftp.astron.com/pub/file/file-5.05.tar.gz
16 wget http://ftp.gnu.org/gnu/findutils/findutils-4.4.2.tar.gz
17 wget http://prdownloads.sf.net/flex/flex-2.5.35.tar.bz2
18 wget http://ftp.gnu.org/gnu/gawk/gawk-3.1.8.tar.bz2
19 wget http://ftp.gnu.org/gnu/gcc/gcc-4.5.2/gcc-4.5.2.tar.bz2
20 wget http://ftp.gnu.org/gnu/gdbm/gdbm-1.8.3.tar.gz
21 wget http://ftp.gnu.org/gnu/gettext/gettext-0.18.1.1.tar.gz
22 wget http://ftp.gnu.org/gnu/glibc/glibc-2.13.tar.bz2
23 wget http://ftp.gnu.org/gnu/gmp/gmp-5.0.1.tar.bz2
24 wget http://ftp.gnu.org/gnu/grep/grep-2.7.tar.gz
25 wget http://ftp.gnu.org/gnu/groff/groff-1.21.tar.gz
26 wget ftp://alpha.gnu.org/gnu/grub/grub-1.98.tar.gz
27 wget http://ftp.gnu.org/gnu/gzip/gzip-1.4.tar.gz
28 wget
29 http://anduin.linuxfromscratch.org/sources/LFS/lfs-packages/conglomeration/iana-etc/iana-etc-2.30.tar.bz2
30 wget http://ftp.gnu.org/gnu/inetutils/inetutils-1.8.tar.gz
31 wget http://devresources.linuxfoundation.org/dev/iproute2/download/iproute2-2.6.37.tar.bz2
32 wget http://www.kernel.org/pub/linux/utils/kbd/kbd-1.15.2.tar.gz
33 wget http://www.greenwoodsoftware.com/less/less-436.tar.gz
34 wget http://www.linuxfromscratch.org/lfs/downloads/6.8/lfs-bootscripts-20100627.tar.bz2
35 wget http://ftp.gnu.org/gnu/libtool/libtool-2.4.tar.gz
36 wget http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.37.tar.bz2
37 wget http://ftp.gnu.org/gnu/m4/m4-1.4.15.tar.bz2
38 wget http://download.savannah.gnu.org/releases/man-db/man-db-2.5.9.tar.gz
39 wget http://www.kernel.org/pub/linux/docs/manpages/man-pages-3.32.tar.bz2
40 wget http://www.kernel.org/pub/linux/utils/kernel/module-init-tools/module-init-tools-3.12.tar.bz2
41 wget http://www.multiprecision.org/mpc/download/mpc-0.8.2.tar.gz
42 wget http://www.mpfr.org/mpfr-3.0.0/mpfr-3.0.0.tar.bz2
43 wget http://ftp.gnu.org/gnu/ncurses/ncurses-5.7.tar.gz
44 wget http://ftp.gnu.org/gnu/patch/patch-2.6.1.tar.bz2
45 wget http://www.cpan.org/src/5.0/perl-5.12.3.tar.bz2
46 wget http://pkgconfig.freedesktop.org/releases/pkg-config-0.25.tar.gz
47 wget http://procps.sf.net/procps-3.2.8.tar.gz
48 wget http://prdownloads.sourceforge.net/psmisc/psmisc-22.13.tar.gz
49 wget http://ftp.gnu.org/gnu/readline/readline-6.2.tar.gz
50 wget http://ftp.gnu.org/gnu/sed/sed-4.2.1.tar.bz2
51 wget ftp://pkg-shadow.alioth.debian.org/pub/pkg-shadow/shadow-4.1.4.3.tar.bz2
52 wget http://download.savannah.gnu.org/releases/sysvinit/sysvinit-2.88dsf.tar.bz2
53 wget http://ftp.gnu.org/gnu/tar/tar-1.25.tar.bz2
54 wget http://prdownloads.sourceforge.net/tcl/tcl8.5.9-src.tar.gz
55 wget http://ftp.gnu.org/gnu/texinfo/texinfo-4.13a.tar.gz
56 wget http://www.kernel.org/pub/linux/utils/kernel/hotplug/udev-166.tar.bz2
57 wget http://anduin.linuxfromscratch.org/sources/other/udev-166-testfiles.tar.bz2
58 wget http://www.linuxfromscratch.org/lfs/downloads/6.8/udev-config-20100128.tar.bz2
59 wget http://www.kernel.org/pub/linux/utils/util-linux/v2.19/util-linux-2.19.tar.bz2
60 wget ftp://ftp.vim.org/pub/vim/unix/vim-7.3.tar.bz2
61 wget http://tukaani.org/xz/xz-5.0.1.tar.bz2
62 wget http://www.zlib.net/zlib-1.2.5.tar.bz2
63 wget http://www.linuxfromscratch.org/patches/lfs/6.8/bzip2-1.0.6-install-docs-1.patch
64 wget http://www.linuxfromscratch.org/patches/lfs/6.8/coreutils-8.10-i18n-1.patch
65 wget http://www.linuxfromscratch.org/patches/lfs/6.8/coreutils-8.10-uname-1.patch
66 wget http://www.linuxfromscratch.org/patches/lfs/6.8/dejagnu-1.4.4-consolidated-1.patch
67 wget http://www.linuxfromscratch.org/patches/lfs/6.8/flex-2.5.35-gcc44-1.patch
68 wget http://www.linuxfromscratch.org/patches/lfs/6.8/gcc-4.5.2-startfiles_fix-1.patch
69 wget http://www.linuxfromscratch.org/patches/lfs/6.8/glibc-2.13-gcc_fix-1.patch
70 wget http://www.linuxfromscratch.org/patches/lfs/6.8/kbd-1.15.2-backspace-1.patch
71 wget http://www.linuxfromscratch.org/patches/lfs/6.8/patch-2.6.1-test_fix-1.patch
72 wget http://www.linuxfromscratch.org/patches/lfs/6.8/perl-5.12.3-libc-1.patch
73 wget http://www.linuxfromscratch.org/patches/lfs/6.8/procps-3.2.8-fix_HZ_errors-1.patch
74 wget http://www.linuxfromscratch.org/patches/lfs/6.8/procps-3.2.8-watch_unicode-1.patch
75 wget http://www.linuxfromscratch.org/patches/lfs/6.8/procps-3.2.8-watch_unicode-1.patch

```

1.7 Créer un sous dossier tools

```

1 mkdir -v $LFS/tools
2 ln -sv $LFS/tools /

```

1.8 Ajout de l'utilisateur lfs

```

1 groupadd lfs
2 useradd -s /bin/bash -g lfs -m -k /dev/null lfs
3 passwd lfs
4 chown -v lfs $LFS/tools
5 su - lfs

```


1.9 Préparation de l'environnement

```
1 lfs@sysresccd ~ $ cat > ~/.bash_profile << "EOF"
2 > exec env -i HOME=$HOME TERM=$TERM PS1='\u:\w\$ ' /bin/bash
3 > EOF
4 lfs@sysresccd ~ $
```

```
1 cat > ~/.bashrc << "EOF"
2 > set +h
3 > umask 002
4 > LFS=/mnt/lfs LC_ALL=POSIX
5 > LFS_TGT=$(uname -m)-lfs-linux-gnu
6 > PATH=/tools/bin:/bin:/usr/bin
7 > export LFS LC_ALL LFS_TGT PATH
8 > EOF
```

```
1 source ~/.bash_profile
```

1.10 Compilation de binutils

```
1 cd /mnt/LFS/sources
2 tar xvfj binutils-2.21.tar.bz2
3 cd binutils-2.21
4 ./configure --target=$LFS_TGT --prefix=/tools --disable-nls --disable-werror
5 make
6 make install
```

1.11 Compilation de gcc pass 1

```
1 cd /mnt/LFS/sources
2 tar xvfj mpfr-3.0.0.tar.bz2
3 mv mpfr-3.0.0 mpfr
4 tar xvfj gmp-5.0.1.tar.bz2
5 mv gmp-5.0.1 gmp
6 tar xvfz mpc-0.8.2.tar.gz
7 mv mpc-0.8.2 mpc
8 tar xvfj gcc-4.5.2.tar.bz2
9 mkdir gcc-build
10 mv gmp mpc mpfr gcc-4.5.2
11 cd gcc-build/
12 ./gcc-4.5.2/configure --target=$LFS_TGT --prefix=/tools --disable-nls --disable-shared
13 --disable-multilib --disable-decimal-float --disable-threads --disable-libmudflap --disable-libssp
14 --disable-libgomp --enable-languages=c --with-gmp-include=$(pwd)/gmp --with-gmp-lib=$(pwd)/gmp/.libs
15 --without-pp1 --without-cloog
16 make
17 make install
18 ln -vs libgcc.a "$LFS_TGT-gcc -print-libgcc-file-name | sed 's/libgcc/&_eh/'"
```

1.12 headers kernel 2.6.37

```
1 tar xvfj linux-2.6.37.tar.bz2
2 cd linux-2.6.37
3 make mrproper
4 make headers_check
5 make INSTALL_HDR_PATH=dest headers_install
6 cp -rv dest/include/* /tools/include
```

1.13 Compilation glibc

```
1 tar xvfj glibc-2.13.tar.bz2
2 cd glibc-2.13
3 patch -Np1 -i ../glibc-2.13-gcc_fix-1.patch
4 case `uname -m` in
5   i?86) echo "CFLAGS += -march=i486 -mtune=native" > configparms ;;
6   esac
7 ../glibc-2.13/configure --prefix=/tools --host=$LFS_TGT
8 --build=$(../glibc-2.13/scripts/config.guess) --disable-profile --enable-add-ons
9 --enable-kernel=2.6.22.5 --with-headers=/tools/include libc_cv_forced_unwind=yes
10 libc_cv_c_cleanup=yes
11 make
12 make install
```

1.14 Ajuster le toolchain

```

1 SPECS='dirname $($LFS_TGT-gcc -print-libgcc-file-name)'/specs
2 echo $SPECS
3 $LFS_TGT-gcc -dumpspecs | sed -e 's@/lib\((64)\)?/ld@/tools&&@g' -e '/\ *cpp:${n;s,$, -isystem
4 /tools/include,}' > $SPECS
5 echo "New specs file is: $SPECS"
6 unset SPECS
7 cd /tmp
8 echo 'main(){}' > dummy.c
9 $LFS_TGT-gcc -B/tools/lib dummy.c
10 readelf -l a.out | grep ': /tools'
11 rm -v dummy.c a.out

```

1.15 binutils pass 2

```

1 cd /mnt/lfs/sources/binutils-build/
2 rm -rf *
3 CC="$LFS_TGT-gcc -B/tools/lib/" AR=$LFS_TGT-ar RANLIB=$LFS_TGT-ranlib ../binutils-2.21/configure
4 --prefix=/tools --disable-nls --with-lib-path=/tools/lib
5 make
6 make install
7 make -C ld clean
8 make -C ld LIB_PATH=/usr/lib:/lib
9 cp -v ld/ld-new /tools/bin

```

1.16 gcc pass 2

```

1 cd ../gcc-4.5.2
2 patch -Np1 -i ../gcc-4.5.2-startfiles_fix-1.patch
3 cp -v gcc/Makefile.in{,.orig}
4 sed 's@./fixinc\.sh@-c true@' gcc/Makefile.in.orig > gcc/Makefile.in
5 cp -v gcc/Makefile.in{,.tmp}
6 sed 's/^T_CFLAGS =$/& -fomit-frame-pointer/' gcc/Makefile.in.tmp > gcc/Makefile.in
7 for file in \
8 $(find gcc/config -name linux64.h -o -name linux.h -o -name sysv4.h)
9 do
10 cp -uv $file{,.orig}
11 sed -e 's@/lib\((64)\)?\ld@/tools&&@g' \
12 -e 's@/usr@/tools@g' $file.orig > $file
13 echo '
14 #undef STANDARD_INCLUDE_DIR
15 #define STANDARD_INCLUDE_DIR 0
16 #define STANDARD_STARTFILE_PREFIX_1 ""
17 #define STANDARD_STARTFILE_PREFIX_2 ""' >> $file
18 touch $file.orig
19 done
20 case $(uname -m) in
21 x86_64)
22 for file in $(find gcc/config -name t-linux64) ; do \
23 cp -v $file{,.orig}
24 sed '/MULTILIB_OSDIRNAMES/d' $file.orig > $file
25 done
26 ;;
27 esac
28 tar -jxf ../mpfr-3.0.0.tar.bz2
29 mv -v mpfr-3.0.0 mpfr
30 tar -jxf ../gmp-5.0.1.tar.bz2
31 mv -v gmp-5.0.1 gmp
32 tar -zxf ../mpc-0.8.2.tar.gz
33 mv -v mpc-0.8.2 mpc
34 mkdir -v ../gcc-build
35 cd ..
36 rm -rf gcc-build/
37 mkdir -v gcc-build
38 cd gcc-build
39 CC="$LFS_TGT-gcc -B/tools/lib/" \
40 AR=$LFS_TGT-ar RANLIB=$LFS_TGT-ranlib \
41 ../gcc-4.5.2/configure --prefix=/tools \
42 --with-local-prefix=/tools --enable-clocale=gnu \
43 --enable-shared --enable-threads=posix \
44 --enable-__cxa_atexit --enable-languages=c,c++ \
45 --disable-libstdcxx-pch --disable-multilib \
46 --disable-bootstrap --disable-libgomp \
47 --with-gmp-include=$(pwd)/gmp --with-gmp-lib=$(pwd)/gmp/.libs \
48 --without-ppl --without-cloog
49 make
50 make install

```

```

51 ln -vs gcc /tools/bin/cc
52 cd /tmp
53 echo 'main(){}' > dummy.c
54 cc dummy.c
55 readelf -l a.out | grep ': /tools'
56 rm -v dummy.c a.out

```

1.17 TCL

```

1 cd $LFS/sources
2 tar xvfz tcl8.5.9-src.tar.gz
3 cd tcl8.5.9/unix/
4 ./configure --prefix=/tools
5 make
6 TZ=UTC make test
7 make install
8 chmod -v u+w /tools/lib/libtcl8.5.so
9 make install-private-headers
10 ln -sv tclsh8.5 /tools/bin/tclsh

```

1.18 Expect

```

1 cd $LFS/sources/
2 tar xvfz expect5.45.tar.gz
3 cp -v configure{,.orig}
4 sed 's:/usr/local/bin:/bin:' configure.orig > configure
5 ./configure --prefix=/tools --with-tcl=/tools/lib --with-tclinclude=/tools/include
6 make
7 make test
8 make SCRIPTS="" install

```

1.19 dejagnu

```

1 cd $LFS/sources
2 tar xvfz dejagnu-1.4.4.tar.gz
3 cd dejagnu-1.4.4
4 patch -Np1 -i ../dejagnu-1.4.4-consolidated-1.patch
5 ./configure --prefix=/tools
6 make install
7 make check

```

1.20 ncurses

```

1 cd $LFS/sources
2 tar xvfz ncurses-5.7.tar.gz
3 ./configure --prefix=/tools --with-shared --without-debug --without-ada --enable-overwrite
4 make
5 make install

```

1.21 bash

```

1 cd $LFS/sources
2 tar xvfz bash-4.2.tar.gz
3 cd bash-4.2
4 ./configure --prefix=/tools --without-bash-malloc
5 make
6 make tests
7 make install
8 ln -sv bash /tools/bin/sh

```

1.22 bzip2

```

1 cd $LFS/sources
2 cd bzip2-1.0.6
3 make
4 make PREFIX=/tools install

```

1.23 coreutils

```
1 cd $LFS/sources
2 tar xvfz coreutils -8.10.tar.gz
3 cd coreutils -8.10
4 ./configure --prefix=/tools --enable-install-program=hostname
5 make
6 make install
```

1.24 diffutils

```
1 cd $LFS/sources
2 tar xvfz diffutils -3.0.tar.gz
3 cd diffutils -3.0
4 ./configure --prefix=/tools
5 make
6 make install
```

1.25 file

```
1 cd $LFS/sources
2 tar xvfz file -5.05.tar.gz
3 cd file -5.05
4 ./configure --prefix=/tools
5 make
6 make install
```

1.26 findutils

```
1 cd $LFS/sources
2 tar xvfz findutils -4.4.2.tar.gz
3 cd findutils -4.4.2
4 ./configure --prefix=/tools
5 make
6 make install
```

1.27 gawk

```
1 cd $LFS/sources
2 tar xvfj gawk -3.1.8.tar.bz2
3 cd gawk -3.1.8
4 ./configure --prefix=/tools
5 make
6 make install
```

1.28 gettext

Attention avec system cd rescue il existe **/usr/bin/emacs** qui est un lien symbolique vers **/usr/bin/zile** ! En root **rm -f /usr/bin/emacs**

```
1 cd $LFS/sources
2 tar xvfz gettext -0.18.1.1.tar.gz
3 cd gettext -0.18.1.1/gettext-tools/
4 ./configure --prefix=/tools --disable-shared
5 make -C gnulib-lib
6 make -C src msgfmt
7 cp -v src/msgfmt /tools/bin
```

1.29 grep

```
1 cd $LFS/sources
2 tar xvfz grep -2.7.tar.gz
3 cd grep -2.7
4 ./configure --prefix=/tools --disable-perl-regex
5 make
6 make install
```

1.30 gzip

```

1 cd $LFS/sources
2 tar xvfz gzip-1.4.tar.gz
3 cd gzip-1.4
4 ./configure --prefix=/tools
5 make
6 make install

```

1.31 m4

```

1 cd $LFS/sources
2 tar xvfj m4-1.4.15.tar.bz2
3 cd m4-1.4.15
4 ./configure --prefix=/tools
5 make
6 make install

```

1.32 make

```

1 cd $LFS/sources
2 tar xvfj make-3.82.tar.bz2
3 cd make-3.82
4 ./configure --prefix=/tools
5 make
6 make install

```

1.33 patch

```

1 cd $LFS/sources
2 tar xvfj patch-2.6.1.tar.bz2
3 cd patch-2.6.1
4 ./configure --prefix=/tools
5 make
6 make install

```

1.34 perl

```

1 cd $LFS/sources
2 tar xvfj perl-5.12.3.tar.bz2
3 cd perl-5.12.3
4 patch -Np1 -i ../perl-5.12.3-libc-1.patch
5 sh Configure -des -Dprefix=/tools -Dstatic_ext='Data/Dumper Fcntl IO'
6 make perl utilities ext/Errno/pm_to_blib
7 cp -v perl pod/pod2man /tools/bin
8 mkdir -pv /tools/lib/perl5/5.12.3
9 cp -Rv lib/* /tools/lib/perl5/5.12.3

```

1.35 sed

```

1 cd $LFS/sources
2 tar xvfj sed-4.2.1.tar.bz2
3 cd sed-4.2.1
4 ./configure --prefix=/tools
5 make
6 make install

```

1.36 tar

```

1 cd $LFS/sources
2 tar xvfj tar-1.25.tar.bz2
3 cd tar-1.25
4 ./configure --prefix=/tools
5 make
6 make install

```

1.37 texinfo

```

1 cd $LFS/sources
2 tar xvfz texinfo-4.13a.tar.gz
3 cd texinfo-4.13
4 ./configure --prefix=/tools
5 make
6 make install

```

1.38 xz

```
1 cd $LFS/sources
2 tar xvfj xz-5.0.1.tar.bz2
3 cd xz-5.0.1
4 ./configure --prefix=/tools
5 make
6 make install
```

1.39 strippe-moi tout ça

```
1 strip --strip-debug /tools/lib/*
2 strip --strip-unneeded /tools/{,s}bin/*
```

1.40 changer les permissions

```
1 chown -R root:root $LFS/tools
```

1.41 Virtual Kernel File Systems

```
1 mkdir -v $LFS/{dev,proc,sys}
2 mknod -m 600 $LFS/dev/console c 5 1
3 mknod -m 666 $LFS/dev/null c 1 3
4 mount -v --bind /dev $LFS/dev
5 mount -vt devpts devpts $LFS/dev/pts
6 mount -vt tmpfs shm $LFS/dev/shm
7 mount -vt proc proc $LFS/proc
8 mount -vt sysfs sysfs $LFS/sys
```

1.42 Entering the Chroot Environment

```
1 chroot "$LFS" /tools/bin/env -i HOME=/root TERM="$TERM" PS1='\u:\w\$ '
2 PATH=/bin:/usr/bin:/sbin:/usr/sbin:/tools/bin /tools/bin/bash --login +h
```

1.43 Creating directories

```
1 mkdir -pv /{bin,boot,etc/opt,home,lib,mnt,opt}
2 mkdir -pv /{media/{floppy,cdrom},sbin,svr,var}
3 install -dv -m 0750 /root
4 install -dv -m 1777 /tmp /var/tmp
5 mkdir -pv /usr/{,local/}{bin,include,lib,sbin,src}
6 mkdir -pv /usr/{,local}/share/{doc,info,locale,man}
7 mkdir -v /usr/{,local}/share/{misc,terminfo,zoneinfo}
8 mkdir -pv /usr/{,local}/share/man/man{1..8}
9 for dir in /usr /usr/local; do ln -sv share/{man,doc,info} $dir; done
10 case $(uname -m) in x86_64) ln -sv lib/lib64 && ln -sv lib /usr/lib64 ;; esac
11 mkdir -v /var/{lock,log,mail,run,spool}
12 mkdir -pv /var/{opt,cache,lib/{misc,locate},local}
```

1.44 Creating Essential Files and Symlinks

```
1 ln -sv /tools/bin/{bash,cat,echo,pwd,stty} /bin
2 ln -sv /tools/bin/perl /usr/bin
3 ln -sv /tools/lib/libgcc_s.so{.1} /usr/lib
4 ln -sv /tools/lib/libstdc++.so{.6} /usr/lib
5 ln -sv bash /bin/sh
6 touch /etc/mtab
7 cat > /etc/passwd << "EOF"
8 root:x:0:0:root:/root:/bin/bash
9 bin:x:1:1:bin:/dev/null:/bin/false
10 nobody:x:99:99:Unprivileged User:/dev/null:/bin/false
11 EOF
12 exec /tools/bin/bash --login +h
13 touch /var/run/utmp /var/log/{btmp,lastlog,wtmp}
14 chgrp -v utmp /var/run/utmp /var/log/lastlog
15 chmod -v 664 /var/run/utmp /var/log/lastlog
```

1.45 Linux-2.6.37 API Headers

```

1 make mrproper
2 make headers_check
3 make INSTALL_HDR_PATH=dest headers_install
4 find dest/include \( -name .install -o -name ..install.cmd \) -delete
5 cp -rv dest/include/* /usr/include

```

1.46 man pages

```

1 cd $LFS/sources
2 tar xvfj man-pages-3.32.tar.bz2
3 cd man-pages-3.32
4 make install

```

1.47 Glibc-2.13

```

1 cd $LFS/sources
2 DL=$(readelf -l /bin/sh | sed -n 's@.*interpret.*/tools\(.*)]$@\1@p')
3 sed -i "s|libs -o|libs -L/usr/lib -Wl,-dynamic-linker=$DL -o|" \
4     scripts/test-installation.pl
5 unset DL
6 sed -i -e 's/"db1"/& \&\& $name ne "nss_test1"/' scripts/test-installation.pl
7 sed -i 's|@BASH@|/bin/bash|' elf/ldd.bash.in
8 patch -Np1 -i ../glibc-2.13-gcc_fix-1.patch
9 sed -i '195,213 s/PRIVATE_FUTEX/FUTEX_CLOCK_REALTIME/'
10 nptl/sysdeps/unix/sysv/linux/x86_64/pthread_rwlock_timed{rd,wr}lock.S
11 mkdir -v ../glibc-build
12 cd ../glibc-build
13 case `uname -m` in i?86) echo "CFLAGS += -march=i486 -mtune=native -O3 -pipe" > configparms ;;
14 esac
15 ../glibc-2.13/configure --prefix=/usr --disable-profile --enable-add-ons --enable-kernel=2.6.22.5
16 --libexecdir=/usr/lib/glibc
17 make
18 cp -v ../glibc-2.13/iconvdata/gconv-modules iconvdata
19 make -k check 2>&1 | tee glibc-check-log
20 grep Error glibc-check-log
21 make install
22 mkdir -pv /usr/lib/locale
23 localedef -i cs_CZ -f UTF-8 cs_CZ.UTF-8
24 localedef -i de_DE -f ISO-8859-1 de_DE
25 localedef -i de_DE@euro -f ISO-8859-15 de_DE@euro
26 localedef -i de_DE -f UTF-8 de_DE.UTF-8
27 localedef -i en_HK -f ISO-8859-1 en_HK
28 localedef -i en_PH -f ISO-8859-1 en_PH
29 localedef -i en_US -f ISO-8859-1 en_US
30 localedef -i en_US -f UTF-8 en_US.UTF-8
31 localedef -i es_MX -f ISO-8859-1 es_MX
32 localedef -i fa_IR -f UTF-8 fa_IR
33 localedef -i fr_FR -f ISO-8859-1 fr_FR
34 localedef -i fr_FR@euro -f ISO-8859-15 fr_FR@euro
35 localedef -i fr_FR -f UTF-8 fr_FR.UTF-8
36 localedef -i it_IT -f ISO-8859-1 it_IT
37 localedef -i ja_JP -f EUC-JP ja_JP
38 localedef -i tr_TR -f UTF-8 tr_TR.UTF-8
39 localedef -i zh_CN -f GB18030 zh_CN.GB18030
40 make localedata/install-locales
41 cat > /etc/nsswitch.conf << "EOF"
42 # Begin /etc/nsswitch.conf
43
44 passwd: files
45 group: files
46 shadow: files
47
48 hosts: files dns
49 networks: files
50
51 protocols: files
52 services: files
53 ethers: files
54 rpc: files
55
56 # End /etc/nsswitch.conf
57 EOF
58 tzselect
59 cp -v --remove-destination /usr/share/zoneinfo/Europe/Paris /etc/localtime
60 cat > /etc/ld.so.conf << "EOF"
61 /usr/local/lib
62 /opt/lib
63
64 EOF

```

1.48 Re-adjusting the Toolchain

```

1 mv -v /tools/bin/{ld,ld-old}
2 mv -v /tools/$(gcc -dumpmachine)/bin/{ld,ld-old}
3 mv -v /tools/bin/{ld-new,ld}
4 ln -sv /tools/bin/ld /tools/$(gcc -dumpmachine)/bin/ld
5 gcc -dumpspecs | sed -e 's@/tools@g' -e '\/* startfile_prefix_spec :/{n;s@.*/usr/lib/@}' -e
6 '\/*cpp:/{n;s@-isystem /usr/include@}' > 'dirname $(gcc --print-libgcc-file-name)'/specs
7 cd /tmp
8 echo 'main(){}' > dummy.c
9 cc dummy.c -v -Wl,--verbose &&> dummy.log
10 readelf -l a.out | grep ': /lib'
11 grep -o '/usr/lib.*crt[lin].*succeeded' dummy.log
12 grep -B1 '^ /usr/include' dummy.log
13 grep 'SEARCH.*usr/lib' dummy.log | sed 's|; |\n|g'
14 grep '/lib.*libc.so.6' dummy.log
15 grep found dummy.log
16 rm -v dummy.c a.out dummy.log

```

1.49 zlib

```

1 tar xvfj zlib-1.2.5.tar.bz2
2 cd zlib-1.2.5
3 sed -i 's/ifdef _LARGEFILE64_SOURCE/ifndef _LARGEFILE64_SOURCE/' zlib.h
4 CFLAGS='-mstackrealign -fPIC -O3' ./configure --prefix=/usr
5 make
6 make check
7 make install
8 mv -v /usr/lib/libz.so.* /lib
9 ln -sfv ../lib/libz.so.1.2.5 /usr/lib/libz.so

```

1.50 binutils

```

1 expect -c "spawn ls"
2 mkdir -v ../binutils-build
3 cd ../binutils-build
4 ldconfig
5 ../binutils-2.21/configure --prefix=/usr --enable-shared
6 make tooldir=/usr
7 make check
8 make tooldir=/usr install
9 cp -v ../binutils-2.21/include/libiberty.h /usr/include

```

1.51 gmp

```

1 tar xvfj gmp-5.0.1.tar.bz2
2 cd gmp-5.0.1
3 ./configure --prefix=/usr --enable-cxx --enable-mpbsd
4 make
5 make check 2>&1 | tee gmp-check-log
6 awk '/tests passed/{total+=$2} ; END{print total}' gmp-check-log
7 make install
8 mkdir -v /usr/share/doc/gmp-5.0.1
9 cp -v doc/{isa_abi_headache,configuration} doc/*.html /usr/share/doc/gmp-5.0.1

```

1.52 mpfr

```

1 tar xvfj mpfr-3.0.0.tar.bz2
2 cd mpfr-3.0.0
3 ldconfig
4 ./configure --prefix=/usr --enable-thread-safe --docdir=/usr/share/doc/mpfr-3.0.0
5 make
6 make check
7 make install
8 make html
9 make install-html

```

1.53 mpc

```

1 ldconfig
2 tar xvfz mpc-0.8.2.tar.gz
3 cd mpc-0.8.2

```



```

4 ./configure --prefix=/usr
5 make
6 make check
7 make install

```

1.54 gcc

```

1 tar xvfj gcc-4.5.2.tar.bz2
2 cd gcc-4.5.2
3 sed -i 's/install_to_${INSTALL_DEST} //' libiberty/Makefile.in
4 case `uname -m` in i?86) sed -i 's/^T.CFLAGS =$/& -fomit-frame-pointer/' gcc/Makefile.in
5 ;; esac
6 sed -i 's@\.\/fixinc\.sh@-c true@' gcc/Makefile.in
7 mkdir -v ../gcc-build
8 cd ../gcc-build
9 ../gcc-4.5.2/configure --prefix=/usr --libexecdir=/usr/lib --enable-shared
10 --enable-threads=posix --enable-__cxa_atexit --enable-clocale=gnu --enable-languages=c,c++
11 --disable-multilib --disable-bootstrap --with-system-zlib
12 make
13 ulimit -s 16384
14 make -k check #peut provoquer une erreur pour autogen, pas grave
15 ../gcc-4.5.2/contrib/test-summary
16 ls -l ../usr/bin/cpp
17 ls -l ../usr/bin/cpp
18 make install
19 ln -sv ../usr/bin/cpp /lib
20 ln -sv gcc /usr/bin/cc
21 cd /tmp
22 echo 'main(){ }' > dummy.c
23 cc dummy.c -v -Wl,--verbose && dummy.log
24 readelf -l a.out | grep ': /lib'
25 grep -o '/usr/lib.*crt[lin].*succeeded' dummy.log
26 grep -B4 '^ /usr/include' dummy.log
27 grep 'SEARCH.*usr/lib' dummy.log | sed 's|;|\\n|g'
28 grep found dummy.log
29 rm -v dummy.c a.out dummy.log

```

1.55 sed

```

1 tar xvfj sed-4.2.1.tar.bz2
2 cd sed-4.2.1
3 ./configure --prefix=/usr --bindir=/bin --htmldir=/usr/share/doc/sed-4.2.1
4 make
5 make html
6 make check
7 make install
8 make -C doc install-html

```

1.56 pkg-config

```

1 tar xvfz pkg-config-0.25.tar.gz
2 cd pkg-config-0.25
3 ./configure --prefix=/usr
4 make
5 make check
6 make install

```

1.57 ncurses

```

1 tar xvfz ncurses-5.7.tar.gz
2 cd ncurses-5.7
3 ./configure --prefix=/usr --with-shared --without-debug --enable-widc
4 make
5 make install
6 mv -v /usr/lib/libncursesw.so.5* /lib
7 ln -sfv ../lib/libncursesw.so.5 /usr/lib/libncursesw.so
8 for lib in ncurses form panel menu ; do rm -vf /usr/lib/lib${lib}.so ; echo
9 "INPUT(-I${lib}w)" >/usr/lib/lib${lib}.so ; ln -sfv lib${lib}w.a /usr/lib/lib${lib}.a ; done
10 ln -sfv libncurses++w.a /usr/lib/libncurses++.a
11 rm -vf /usr/lib/libcursesw.so
12 echo "INPUT(-Incursesw)" >/usr/lib/libcursesw.so
13 ln -sfv libncurses.so /usr/lib/libcurses.so
14 ln -sfv libncursesw.a /usr/lib/libcursesw.a
15 ln -sfv libncurses.a /usr/lib/libcurses.a
16 mkdir -v /usr/share/doc/ncurses-5.7
17 cp -v -R doc/* /usr/share/doc/ncurses-5.7

```

1.58 util-linux

```

1 tar xvfj util-linux-2.19.tar.bz2
2 cd util-linux-2.19
3 sed -e 's@etc/adjtime@var/lib/hwclock/adjtime@g' -i $(grep -rI '/etc/adjtime' .)
4 mkdir -pv /var/lib/hwclock
5 ./configure --enable-arch --enable-partx --enable-write
6 make
7 make install

```

1.59 e2fsprogs

```

1 tar xvfz e2fsprogs-1.41.14.tar.gz
2 cd e2fsprogs-1.41.14
3 mkdir -v build
4 cd build
5 ./configure --prefix=/usr --with-root-prefix="" --enable-elf-shlibs --disable-libblkid
6 --disable-libuuid --disable-uuid --disable-fsck
7 make
8 make check
9 make install
10 make install-libs
11 chmod -v u+w /usr/lib/{libcom_err,libe2p,libext2fs,libss}.a
12 gunzip -v /usr/share/info/libext2fs.info.gz
13 install-info --dir-file=/usr/share/info/dir /usr/share/info/libext2fs.info
14 makeinfo -o doc/com_err.info ../lib/et/com_err.texinfo
15 install -v -m644 doc/com_err.info /usr/share/info
16 install-info --dir-file=/usr/share/info/dir /usr/share/info/com_err.info

```

1.60 coreutils

```

1 tar xvfz coreutils-8.10.tar.gz
2 cd coreutils-8.10
3 case `uname -m` in i?86 | x86_64) patch -Np1 -i ../coreutils-8.10-uname-1.patch ;; esac
4 patch -Np1 -i ../coreutils-8.10-i18n-1.patch
5 ./configure --prefix=/usr --enable-no-install-program=kill,uptime
6 make
7 make NON_ROOT_USERNAME=nobody check-root
8 echo "dummy:x:1000:nobody" >> /etc/group
9 chown -Rv nobody .
10 su-tools nobody -s /bin/bash -c "make RUN_EXPENSIVE_TESTS=yes check" #marche pas
11 sed -i 's/dummy/d' /etc/group
12 make install
13 mv -v /usr/bin/{cat, chgrp, chmod, chown, cp, date, dd, df, echo} /bin
14 mv -v /usr/bin/{false, ln, ls, mkdir, mknod, mv, pwd, rm} /bin
15 mv -v /usr/bin/{rmdir, stty, sync, true, uname} /bin
16 mv -v /usr/bin/chroot /usr/sbin
17 mv -v /usr/share/man/man1/chroot.1 /usr/share/man/man8/chroot.8
18 sed -i s/"1"/"8"/1 /usr/share/man/man8/chroot.8
19 mv -v /usr/bin/{head, sleep, nice} /bin

```

1.61 Iana-Etc-2.30

```

1 tar xvfj iana-etc-2.30.tar.bz2
2 cd iana-etc-2.30
3 make
4 make install

```

1.62 m4

```

1 tar xvfj m4-1.4.15.tar.bz2
2 cd m4-1.4.15
3 ./configure --prefix=/usr
4 make
5 make check
6 make install

```

1.63 bison

```

1 tar xvfj bison-2.4.3.tar.bz2
2 cd bison-2.4.3
3 ./configure --prefix=/usr
4 echo '#define YYENABLE_NLS 1' >> lib/config.h

```

```
5 make
6 make check
7 make install
```

1.64 procps

```
1 tar xvfz procps-3.2.8.tar.gz
2 cd procps-3.2.8
3 patch -Np1 -i ../procps-3.2.8-fix_HZ_errors-1.patch
4 patch -Np1 -i ../procps-3.2.8-watch_unicode-1.patch
5 sed -i -e 's@\*/module.mk@proc/module.mk ps/module.mk@' Makefile
6 make
7 make install
```

1.65 grep

```
1 tar xvfz grep-2.7.tar.gz
2 cd grep-2.7
3 ./configure --prefix=/usr --bindir=/bin
4 make
5 make check
6 make install
```

1.66 readline

```
1 tar xvfz readline-6.2.tar.gz
2 cd readline-6.2
3 sed -i 's/MV.*old/d' Makefile.in
4 sed -i '{OLD_SUFFIX}c:' support/shlib-install
5 ./configure --prefix=/usr --libdir=/lib
6 make SHLIB_LIBS=-lncurses
7 make install
8 mv -v /lib/lib{readline,history}.a /usr/lib
9 rm -v /lib/lib{readline,history}.so
10 ln -sfv ../../lib/libreadline.so.6 /usr/lib/libreadline.so
11 ln -sfv ../../lib/libhistory.so.6 /usr/lib/libhistory.so
12 mkdir -v /usr/share/doc/readline-6.2
13 install -v -m644 doc/*.{ps,html,dvi} /usr/share/doc/readline-6.2
```

1.67 bash

```
1 tar xvfz bash-4.2.tar.gz
2 cd bash-4.2
3 ./configure --prefix=/usr --bindir=/bin --htmldir=/usr/share/doc/bash-4.2 --without-bash-malloc
4 --with-installed-readline
5 make
6 chown -Rv nobody .
7 make install
8 exec /bin/bash --login +h
```

1.68 libtool

```
1 tar xvfz libtool-2.4.tar.gz
2 cd libtool-2.4
3 ./configure --prefix=/usr
4 make
5 make check
6 make install
```

1.69 gdbm

```
1 tar xvfz gdbm-1.8.3.tar.gz
2 cd gdbm-1.8.3
3 ./configure --prefix=/usr
4 make
5 make install
6 make install-compat
7 install-info --dir-file=/usr/info/dir /usr/info/gdbm.info
```

1.70 inetutils

```

1 tar xvfz inetutils-1.8.tar.gz
2 520 cd inetutils-1.8
3 521 ls
4 522 ./configure --prefix=/usr --libexecdir=/usr/sbin --localstatedir=/var --disable-ifconfig
5 --disable-logger --disable-syslogd --disable-whois --disable-servers
6 523 make
7 524 make check
8 525 make install
9 526 make -C doc html
10 527 make -C doc install-html docdir=/usr/share/doc/inetutils-1.8mv -v
11 /usr/bin/{hostname,ping,ping6} /bin
12 528 mv -v /usr/bin/traceroute /sbin

```

1.71 perl

```

1 tar xvfj perl-5.12.3.tar.bz2
2 cd perl-5.12.3
3 echo "127.0.0.1 localhost $(hostname)" > /etc/hosts
4 sed -i -e "s|BUILD_ZLIB\s*= True|BUILD_ZLIB = False|" -e "s|INCLUDE\s*=
5 ./zlib-src|INCLUDE = /usr/include|" -e "s|LIB\s*= ./zlib-src|LIB = /usr/lib|"
6 cpan/Compress-Raw-Zlib/config.in
7 sh Configure -des -Dprefix=/usr -Dvendorprefix=/usr
8 -Dman1dir=/usr/share/man/man1 -Dman3dir=/usr/share/man/man3
9 -Dpager="/usr/bin/less -isR" -Duseshrplib
10 make
11 sh Configure -des -Dprefix=/usr -Dvendorprefix=/usr
12 -Dman1dir=/usr/share/man/man1 -Dman3dir=/usr/share/man/man3
13 -Dpager="/usr/bin/less -isR" -Duseshrplib
14 make
15 make test
16 make install

```

1.72 autoconf

```

1 tar xvfj autoconf-2.68.tar.bz2
2 cd autoconf-2.68
3 ./configure --prefix=/usr
4 make
5 make check
6 make install

```

1.73 automake

```

1 tar xvfj automake-1.11.1.tar.bz2
2 cd automake-1.11.1
3 ./configure --prefix=/usr --docdir=/usr/share/doc/automake-1.11.1
4 make
5 make check
6 make install

```

1.74 bzip2

```

1 tar xvfz bzip2-1.0.6.tar.gz
2 569 cd bzip2-1.0.6
3 570 patch -Np1 -i ../bzip2-1.0.6-install_docs-1.patch
4 571 sed -i 's@(\ln -s -f \)$(PREFIX)/bin/@\1@' Makefile
5 572 make -f Makefile-libbz2.so
6 573 make clean
7 574 make
8 575 make PREFIX=/usr install
9 576 cp -v bzip2-shared /bin/bzip2
10 577 cp -av libbz2.so* /lib
11 578 ln -sv ../lib/libbz2.so.1.0 /usr/lib/libbz2.so
12 579 rm -v /usr/bin/{bunzip2,bzcat,bzip2}
13 580 ln -sv bzip2 /bin/bunzip2
14 581 ln -sv bzip2 /bin/bzcat

```

1.75 diffutils

```

1 tar xvfz diffutils-3.0.tar.gz
2 cd diffutils-3.0
3 ./configure --prefix=/usr
4 make
5 make check
6 make install

```

1.76 gawk

```

1 tar xvfj gawk-3.1.8.tar.bz2
2 cd gawk-3.1.8
3 ./configure --prefix=/usr --libexecdir=/usr/lib
4 make
5 make check
6 make install
7 mkdir -v /usr/share/doc/gawk-3.1.8
8 cp -v doc/{awkforai.txt,*.eps,pdf,jpg} /usr/share/doc/gawk-3.1.8

```

1.77 file

```

1 tar xvfz file-5.05.tar.gz
2 cd file-5.05
3 ./configure --prefix=/usr
4 make
5 make check
6 make install

```

1.78 findutils

```

1 tar xvfz findutils-4.4.2.tar.gz
2 cd findutils-4.4.2
3 ./configure --prefix=/usr --libexecdir=/usr/lib/findutils --localstatedir=/var/lib/locate
4 make
5 make check
6 make install
7 mv -v /usr/bin/find /bin
8 sed -i 's/find:=${BINDIR}/find:=\bin/' /usr/bin/updatedb

```

1.79 flex

```

1 tar xvfj flex-2.5.35.tar.bz2
2 cd flex-2.5.35
3 patch -Np1 -i ../flex-2.5.35-gcc44-1.patch
4 ./configure --prefix=/usr
5 make
6 make check
7 make install
8 ln -sv libfl.a /usr/lib/libl.a
9 cat > /usr/bin/lex << "EOF"
10 exec /usr/bin/flex -l "$@"
11 EOF
12 chmod -v 755 /usr/bin/lex
13 mkdir -v /usr/share/doc/flex-2.5.35
14 cp -v doc/flex.pdf /usr/share/doc/flex-2.5.35

```

1.80 gettext

```

1 tar xvfz gettext-0.18.1.1.tar.gz
2 cd gettext-0.18.1.1
3 ./configure --prefix=/usr --docdir=/usr/share/doc/gettext-0.18.1.1
4 make
5 make check
6 make install

```

1.81 groff

```

1 tar xvfz groff-1.21.tar.gz
2 cd groff-1.21
3 PAGE=A4 ./configure --prefix=/usr
4 make
5 make install
6 ln -sv eqn /usr/bin/geqn
7 ln -sv tbl /usr/bin/gtbl

```

1.82 grub

```

1 tar xvfz grub-1.98.tar.gz
2 664 cd grub-1.98
3 665 ./configure --prefix=/usr --sysconfdir=/etc
4 --disable-grub-emu-usb --disable-grub-fstest --disable-efiemu
5 666 make
6 667 make install

```

1.83 gzip

```

1 tar xvfz gzip-1.4.tar.gz
2 673 cd gzip-1.4
3 674 ./configure --prefix=/usr --bindir=/bin
4 675 make
5 676 make check
6 677 make install
7 678 mv -v /bin/{gzexe,uncompress,zcmp,zdiff,zegrep} /usr/bin
8 679 mv -v /bin/{zfgrep,zforce,zgrep,zless,zmore,znew} /usr/bin

```

1.84 iproute2

```

1 tar xvfj iproute2-2.6.37.tar.bz2
2 cd iproute2-2.6.37
3 sed -i '/TARGETS/s@arpd@g' misc/Makefile
4 sed -i '1289i\\tfilter.cloned = 2;' ip/iproute.c
5 make DESTDIR=
6 make DESTDIR= SBINDIR=/sbin MANDIR=/usr/share/man DOCDIR=/usr/share/doc/iproute2-2.6.37 install

```

1.85 kbd

```

1 tar xvfz kbd-1.15.2.tar.gz
2 692 cd kbd-1.15.2
3 693 patch -Np1 -i ../kbd-1.15.2-backspace-1.patch
4 694 ./configure --prefix=/usr --datadir=/lib/kbd
5 695 make
6 696 make install
7 697 mv -v /usr/bin/{kbd_mode,loadkeys,openvt,setfont} /bin
8 698 mkdir -v /usr/share/doc/kbd-1.15.2
9 699 cp -R -v doc/* /usr/share/doc/kbd-1.15.2

```

1.86 less

```

1 tar xvfz less-436.tar.gz
2 703 cd less-436
3 704 ./configure --prefix=/usr --sysconfdir=/etc
4 705 make
5 706 make install

```

1.87 make

```

1 tar xvfj make-3.82.tar.bz2
2 711 cd make-3.82
3 712 ./configure --prefix=/usr
4 713 make
5 714 make check
6 715 make install

```

1.88 xz

```

1 tar xvfj xz-5.0.1.tar.bz2
2 720 cd xz-5.0.1
3 721 ./configure --prefix=/usr --docdir=/usr/share/doc/xz-5.0.1
4 722 make
5 723 make check
6 724 make install

```

1.89 man-db

```

1 tar xvfz man-db-2.5.9.tar.gz
2   728 cd man-db-2.5.9
3   729 ./configure --prefix=/usr --libexecdir=/usr/lib --docdir=/usr/share/doc/man-db-2.5.9
4 --sysconfdir=/etc --disable-setuid --with-browser=/usr/bin/lynx --with-vgrind=/usr/bin/vgrind
5 --with-grap=/usr/bin/grap
6   730 make
7   731 make -k check
8   732 make install

```

1.90 module-init-tools

```

1 tar xvfj module-init-tools-3.12.tar.bz2
2   736 cd module-init-tools-3.12
3   737 echo '.so man5/modprobe.conf.5' > modprobe.d.5
4   738 ./configure
5   739 make check
6   740 ./tests/runtests
7   741 make clean
8   742 ./configure --prefix=/ --enable-zlib-dynamic --mandir=/usr/share/man
9   743 make
10  744 make INSTALL=install install

```

1.91 patch

```

1 tar xvfj patch-2.6.1.tar.bz2
2   750 cd patch-2.6.1
3   751 patch -Npl -i ../patch-2.6.1-test_fix-1.patch
4   752 ./configure --prefix=/usr
5   753 make
6   754 make check
7   755 make install

```

1.92 psmisc

```

1 tar xvfz psmisc-22.13.tar.gz
2   759 cd psmisc-22.13
3   760 ./configure --prefix=/usr
4   761 make
5   762 make install
6   763 mv -v /usr/bin/fuser /bin
7   764 mv -v /usr/bin/killall /bin

```

1.93 shadow

```

1 tar xvfj shadow-4.1.4.3.tar.bz2
2   772 cd shadow-4.1.4.3
3   773 sed -i 's/groups$(EXEEXT) //' src/Makefile.in
4   774 find man -name Makefile.in -exec sed -i 's/groups\.1 / /' {} \;
5   775 sed -i 's/man_MANS = $(man_nopam) /man_MANS = /' man/ru/Makefile.in
6   776 sed -i -e 's#@ENCRYPT_METHOD DES@ENCRYPT_METHOD SHA512@' -e 's@/var/spool/mail@/var/mail@'
7 etc/login.defs
8   777 sed -i 's@DICTPATH.*@DICTPATH\t/lib/cracklib/pw_dict@' etc/login.defs
9   778 ./configure --sysconfdir=/etc
10  779 make
11  780 make install
12  781 mv -v /usr/bin/passwd /bin
13  782 pwconv
14  783 grpconv
15  784 sed -i 's/yes/no/' /etc/default/useradd
16  785 passwd root

```

1.94 sysklogd

```

1 tar xvfz sysklogd-1.5.tar.gz
2   789 cd sysklogd-1.5
3   790 make
4   791 make BINDIR=/sbin install
5   792 cat > /etc/syslog.conf << "EOF"
6 auth,authpriv.* -/var/log/auth.log
7 *.*:auth,authpriv.none -/var/log/sys.log
8 daemon.* -/var/log/daemon.log
9 kern.* -/var/log/kern.log
10 mail.* -/var/log/mail.log

```

```

11 user.* -/var/log/user.log
12 *.emerg *
13 EOF

```

1.95 sysvinit

```

1 tar xvfj sysvinit-2.88dsf.tar.bz2
2   796 cd sysvinit-2.88dsf
3   797 sed -i 's@Sending processes@& configured via /etc/inittab@g' src/init.c
4   798 sed -i -e 's/utmpdump wall/utmpdump/' -e 's/mountpoint.1 wall.1/mountpoint.1/' src/Makefile
5   799 make -C src
6   800 make -C src install
7   801 cat > /etc/inittab << "EOF"
8 id:3:initdefault:
9
10 si::sysinit:/etc/rc.d/init.d/rc sysinit
11
12 10:0:wait:/etc/rc.d/init.d/rc 0
13 11:S1:wait:/etc/rc.d/init.d/rc 1
14 12:2:wait:/etc/rc.d/init.d/rc 2
15 13:3:wait:/etc/rc.d/init.d/rc 3
16 14:4:wait:/etc/rc.d/init.d/rc 4
17 15:5:wait:/etc/rc.d/init.d/rc 5
18 16:6:wait:/etc/rc.d/init.d/rc 6
19
20 ca:12345:ctrlaltdel:/sbin/shutdown -t1 -a -r now
21
22 su:S016:once:/sbin/sulogin
23
24 1:2345:respawn:/sbin/agetty tty1 9600
25 2:2345:respawn:/sbin/agetty tty2 9600
26 3:2345:respawn:/sbin/agetty tty3 9600
27 4:2345:respawn:/sbin/agetty tty4 9600
28 5:2345:respawn:/sbin/agetty tty5 9600
29 6:2345:respawn:/sbin/agetty tty6 9600
30
31 EOF

```

1.96 tar

```

1 tar xvfj tar-1.25.tar.bz2
2   807 cd tar-1.25
3   808 FORCE_UNSAFE_CONFIGURE=1 ./configure --prefix=/usr --bindir=/bin --libexecdir=/usr/sbin
4   809 make
5   810 make check
6   811 make install
7   812 make -C doc install--html docdir=/usr/share/doc/tar-1.25

```

1.97 texinfo

```

1 tar xvfz texinfo-4.13a.tar.gz
2   817 cd texinfo-4.13
3   818 ./configure --prefix=/usr ; make ; make check
4   819 make install
5   820 make TEXMF=/usr/share/texmf install--tex

```

1.98 udev

```

1 tar xvfj udev-166.tar.bz2
2   824 c udev-166
3   825 cd udev-166
4   826 tar -xvf ../udev-config-20100128.tar.bz2
5   827 tar -xvf ../udev-166-testfiles.tar.bz2 --strip-components=1
6   828 install -dv /lib/{firmware,udev/devices/{pts,shm}}
7   829 mknod -m0666 /lib/udev/devices/null c 1 3
8   830 ./configure --prefix=/usr --sysconfdir=/etc --sbindir=/sbin --with-rootlibdir=/lib
9 --libexecdir=/lib/udev --disable-extras --disable-introspection
10  831 make
11  832 make
12  833 make check
13  834 make install
14  835 rmdir -v /usr/share/doc/udev
15  836 cd udev-config-20100128
16  837 make install
17  838 make install--doc

```


1.99 vim

```

1 tar xvfj vim-7.3.tar.bz2
2   843 cd vim
3   844 cd vim73/
4   845 echo '#define SYS_VIMRC_FILE "/etc/vimrc"' >> src/feature.h
5   846 ./configure --prefix=/usr --enable-multibyte
6   847 make ; make test ; make install
7   848 ldconfig
8   849* make ;
9   850 ./configure --prefix=/usr --enable-multibyte
10  851 make
11  852 make test
12  853 hist
13  854 history
14  855 make install
15  856 ln -sv vim /usr/bin/vi
16  857 for L in /usr/share/man/{,*/}man1/vim.1; do ln -sv vim.1 $(dirname $L)/vi.1; done
17  858 ln -sv ../vim/vim73/doc /usr/share/doc/vim-7.3
18  859 cat > /etc/vimrc << "EOF"
19 " Begin /etc/vimrc
20
21 set nocompatible
22 set backspace=2
23 syntax on
24 if (&term == "iterm") || (&term == "putty")
25     set background=dark
26 endif
27
28 " End /etc/vimrc
29 EOF

```

1.100 Stripping Again

```

1 chroot $LFS /tools/bin/env -i \\\n HOME=/root TERM=$TERM PS1='\u:\w\$ ' \\\n
2 PATH=/bin:/usr/bin:/sbin:/usr/sbin \\\n /tools/bin/bash --login
3 /tools/bin/find /{,usr/}{bin,lib,sbin} -type f -exec /tools/bin/strip --strip-debug '{} ' ';'

```

1.101 lfs-scripts

```

1 tar xvf lfs-bootscripts-20100627.tar.bz2
2   490 cd lfs-bootscripts-20100627
3   491 make install

```

1.102 setclock script

```

1 cat > /etc/sysconfig/clock << "EOF"
2 # Begin /etc/sysconfig/clock
3
4 UTC=1
5
6 # Set this to any options you might need to give to hwclock,
7 # such as machine hardware clock type for Alphas.
8 CLOCKPARAMS=
9
10 # End /etc/sysconfig/clock
11 EOF

```

1.103 linux console

```

1 cat > /etc/sysconfig/clock << "EOF"
2 UTC=1
3
4 CLOCKPARAMS=
5
6 EOF
7
8   494 cat > /etc/sysconfig/console << "EOF"
9 KEYMAP="p12"
10 FONT="lat2a-16 -m 8859-2"
11
12 EOF
13
14   495 cat > /etc/sysconfig/console << "EOF"

```

```

15 KEYMAP="de-latin1"
16 KEYMAP_CORRECTIONS="euro2"
17 FONT="lat0-16 -m 8859-15"
18
19 EOF
20
21 496 cat > /etc/sysconfig/console << "EOF"
22 UNICODE="1"
23 KEYMAP="bg-bds-utf8"
24 FONT="LatArCyrHeb-16"
25
26 EOF
27
28 497 cat > /etc/sysconfig/console << "EOF"
29 UNICODE="1"
30 KEYMAP="bg-bds-utf8"
31 FONT="cyr-sun16"
32
33 EOF
34
35 498 cat > /etc/sysconfig/console << "EOF"
36 UNICODE="1"
37 KEYMAP="de-latin1"
38 KEYMAP_CORRECTIONS="euro2"
39 LEGACY_CHARSET="iso-8859-15"
40 FONT="LatArCyrHeb-16 -m 8859-15"
41
42 EOF

```

1.104 /etc/inputrc

```

1 cat > /etc/inputrc << "EOF"
2 # Begin /etc/inputrc
3 # Modified by Chris Lynn <roryo@roryo.dynup.net>
4
5 # Allow the command prompt to wrap to the next line
6 set horizontal-scroll-mode Off
7
8 # Enable 8bit input
9 set meta-flag On
10 set input-meta On
11
12 # Turns off 8th bit stripping
13 set convert-meta Off
14
15 # Keep the 8th bit for display
16 set output-meta On
17
18 # none, visible or audible
19 set bell-style none
20
21 # All of the following map the escape sequence of the value
22 # contained in the 1st argument to the readline specific functions
23 "\eOd": backward-word
24 "\eOc": forward-word
25
26 # for linux console
27 "\e[1~": beginning-of-line
28 "\e[4~": end-of-line
29 "\e[5~": beginning-of-history
30 "\e[6~": end-of-history
31 "\e[3~": delete-char
32 "\e[2~": quoted-insert
33
34 # for xterm
35 "\eOH": beginning-of-line
36 "\eOF": end-of-line
37
38 # for Konsole
39 "\e[H": beginning-of-line
40 "\e[F": end-of-line
41
42 # End /etc/inputrc
43 EOF

```

1.105 Bash Shell Startup Files

```

1 locale -a
2 503 LC_ALL=fr_FR.utf8 locale charmap

```

```

3 504 LC_ALL=fr_FR.utf8 locale language
4 505 LC_ALL=fr_FR.utf8 locale charmap
5 506 LC_ALL=fr_FR.utf8 locale int_curr_symbol
6 507 LC_ALL=fr_FR.utf8 locale int_prefix
7 508 cat > /etc/profile << "EOF"
8 export LANG<<11 ><CC>.<charmap><@modifiers>
9
10 EOF

```

1.106 udev

```

1 udevadm test /sys/block/hdd
2 511 sed -i -e 's/" write_cd_rules mode"/'
3 /lib/udev/rules.d/75-cd-aliases-generator.rules
4 512 udevadm info -a -p /sys/class/video4linux/video0
5 513 cat > /etc/udev/rules.d/83-duplicate_devs.rules << "EOF"
6
7 KERNEL=="video*", ATTRS{idProduct}=="1910", ATTRS{idVendor}=="0d81", \
8 SYMLINK+="webcam"
9 KERNEL=="video*", ATTRS{device}=="0x036f", ATTRS{vendor}=="0x109e", \
10 SYMLINK+="tvtuner"
11
12 EOF

```

1.107 localnet script

```

1 echo "HOSTNAME=lfs" > /etc/sysconfig/network

```

1.108 /etc/hosts

```

1 cat > /etc/hosts << "EOF"
2 127.0.0.1 localhost
3 192.168.0.19 lfs.nodoubt.com lfs
4 EOF

```

1.109 network script

```

1 cd /etc/sysconfig/network-devices
2 mkdir -v ifconfig.eth0
3 cat > ifconfig.eth0/ipv4 << "EOF"
4 ONBOOT=yes
5 SERVICE=ipv4-static
6 IP=192.168.0.19
7 GATEWAY=192.168.0.254
8 PREFIX=24
9 BROADCAST=192.168.0.255
10 EOF

```

```

1 cat > /etc/resolv.conf << "EOF"
2 # Begin /etc/resolv.conf
3
4 domain nodoubt.com
5 search nodoubt.com
6 nameserver 192.168.0.253
7
8 # End /etc/resolv.conf
9 EOF

```

1.110 /etc/fstab

```

1 cat > /etc/fstab << "EOF"
2
3 /dev/sda1 / ext3 defaults 1 1
4 /dev/sda2 swap swap pri=1 0 0
5 proc /proc proc defaults 0 0
6 sysfs /sys sysfs defaults 0 0
7 devpts /dev/pts devpts gid=4,mode=620 0 0
8 tmpfs /dev/shm tmpfs defaults 0 0
9 EOF

```

1.111 linux-2.6.37