

FreeBSD ports



FreeBSD ports



Default installation giver et "basissystem"

Kernerelateret:

- Hardware drivere
- Pakkefiltre: ipfw(4), pf(4), ipf(4)
- Netværk: ppp(4), tunnel (gif(4), gre(4), tun(4))
- Software RAID

Userland:

- sh(1), tcsh(1)
- OpenSSH, inetd(8), ntpd(8), named(8), sendmail(8)
- make(1), gcc(1)
- vi(1), ee(1)

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```
lem ur# ftp ftp.dk.freebsd.org
Connected to ftp.dk.freebsd.org.
220 FTP server ready.
Name (ftp.dk.freebsd.org:~): anonymous
331 Guest.bgin ok, send your email address as password.
Password:
230 Guest.bgin ok, access restrictions apply.
Remote system type is UNKNOWN.
ftp> cd /pub/FreeBSD/ports/386/packages-4-stable/security
250 CWD command successful.
ftp> get p5-DigestMD4-1.5.tgz
local: p5-DigestMD4-1.5.tgz remote: p5-DigestMD4-1.5.tgz
150 Opening ASCII mode data connection for p5-DigestMD4-1.5.tgz (27992 bytes).
226 Transfer complete.
28100 bytes received in 0.09 seconds (320.00 KB/s)
ftp> bye
221 Goodbye.
lem ur# pkg_add p5-DigestMD4-1.5.tgz
lem ur#

lem ur# pkg_add ftp://ftp.dk.freebsd.org/pub/FreeBSD/ports/386/packages-4-stable/security/p5-DigestMD4-1.5.tgz
Fetching ftp://ftp.dk.freebsd.org/pub/FreeBSD/ports/386/packages-4-stable/security/p5-DigestMD4-1.5.tgz... Done.
lem ur#
```

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Installation af portstræet:

- tarball
- cvsup(1)
 - catch22 - det er en port selv:net/cvsup
 - installer portstræ fra tarball, installer cvsup og opgrader
 - hent pakken via ftp
- csup(1)
- portsnap(8)
 - i basissystem siden 5.4-STABLE og 6.0-RELEASE
 - sikker
 - komprimeret
 - HTTP

FreeBSD ports



```
koala.droso.net FreeBSD 5.4-RELEASE X
> ls /usr/ports/
CHANGES      accessibility  droso          mail           shells
COPYRIGHT    arabic         editors        math           sysutils
INDEX         archivers     emulators      mbone         textproc
INDEX-5      astro         finance        misc           ukrainian
INDEX-5.db   audio         french         multimedia    vietnamese
INDEX-6      benchmarks   ftp            net            www
INDEX.db     biology       games          net-im        x11
KNOBS        cad           german         net-mgmt      x11-clocks
LEGAL        chinese       graphics       news          x11-fm
MOVED        comms        hebrew         palm          x11-fonts
Makefile     converters   hungarian     polish        x11-servers
Mk           databases    irc            portuguese    x11-themes
README       deskutils    japanese      print         x11-toolkits
Templates    devel        java           russian       x11-wm
Tools        distfiles    korean        science
UPDATING     dns          lang           security
> █
```

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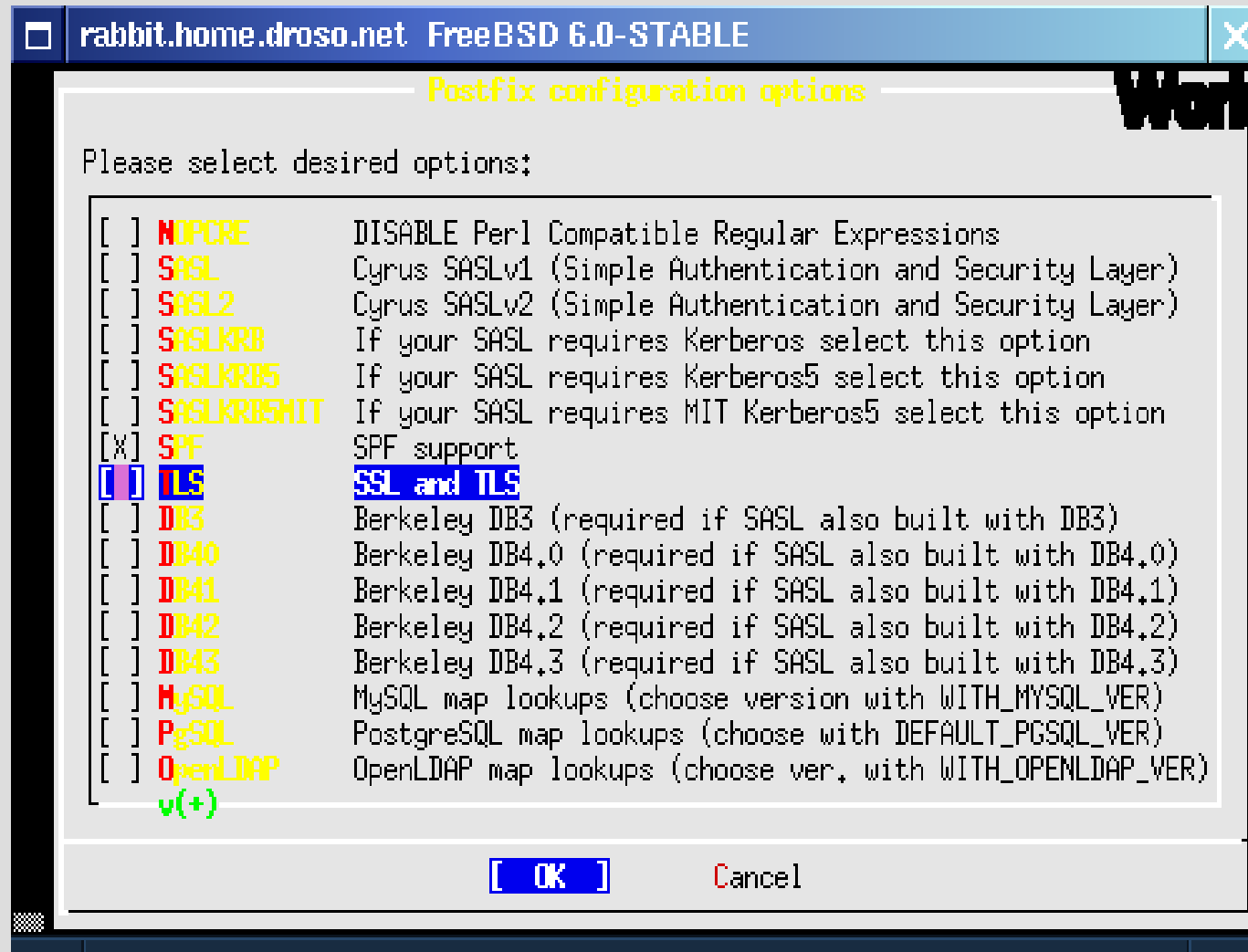
```
lemur# cd /usr/ports
lemur# make search name=p5-Digest-MD5
Port:      p5-Digest-MD5-2.33
Path:      /usr/ports/security/p5-Digest-MD5
Info:      Perl5 interface to the MD5 algorithm
Maint:     petef@FreeBSD.org
B-deps:    p5-Digest-1.14 p5-MIME-Base64-3.07 p5-XSLoader-0.06
R-deps:    p5-Digest-1.14 p5-MIME-Base64-3.07 p5-XSLoader-0.06
WWW:       http://search.cpan.org/dist/Digest-MD5/
```

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```
lem ur# cd /usr/ports/security/p5-DigestMD5
lem ur# make install
=> Extracting forp5-DigestMD5-2.33
=> MD5 Checksum OK for DigestMD5-2.33.tar.gz.
=> Patching forp5-DigestMD5-2.33
=> p5-DigestMD5-2.33 depends on file: /usr/local/lib/perl/site_perl/5.005/Digest.pm -found
=> Configuring forp5-DigestMD5-2.33
Testing alignment requirements forU32 ... no restrictions
Checking if your kit is complete...
Looks good
Writing Makefile for DigestMD5
=> Building forp5-DigestMD5-2.33
...
=> Installing forp5-DigestMD5-2.33
=> p5-DigestMD5-2.33 depends on file: /usr/local/lib/perl/site_perl/5.005/Digest.pm -found
=> Generating temporary packing list
=> Checking if security/p5-DigestMD5 already installed
...
Installing /usr/local/lib/perl/site_perl/5.005/386-freebsd/DigestMD5.pm
Installing /usr/local/lib/perl/5.00503/man/man3/DigestMD5.3
...
=> Compressing manual pages forp5-DigestMD5-2.33
=> Registering installation forp5-DigestMD5-2.33
lem ur#
```

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```
lemur# make WITHOUT_PCRE=yes WITH_TLS=yes
```

Prækompilerede pakker fra cd eller ftp er med default options.

Globale variabler sættes i /etc/make.conf

```
> grep MASTER /etc/make.conf
MASTER_SITE_BACKUP?=      \
MASTER_SITE_OVERRIDE?=    ${MASTER_SITE_BACKUP}
MASTER_SORT_REGEX?=       ^file:
^ftp://ftp\.dk\.FreeBSD\.org/pub/FreeBSD/ports/localdistfiles
/ ://[^\/*]*\.dk/ ://[^\/*]*\.dk\.
```

ports-mgmt/portconf

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Upgradering

net/cvsup[-without-gui]

```
lem ur# cvsup -g -L 2 ports-supfile
```

sysutils/portsnap (< 5.4-STABLE el. 6.0-RELEASE)

```
lem ur# portsnap fetch
```

```
lem ur# portsnap extract
```

```
lem ur# portsnap update
```

sysutils/portupgrade

```
lem ur# portupgrade -a  
/usr/local/etc/pkgtools.conf
```

FreeBSD ports



Upgradering

sysutils/portupgrade

```
em ur# portupgrade -a
```

```
/usr/local/etc/pkgtools.conf
```

- n Vis hvad der skal ske men gør ikke noget
- P Brug pakker
- r Rekursiv. Gør det samme på pakker der afhænger denne pakke end den gør for denne pakke.
- R Rekursiv opad. Gør det samme på de pakker denne pakke afhænger af.

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```
laur# ls -l
total 8
-rw-r--r-- 1 root wheel 649 Dec  7 04:01 Makefile
-rw-r--r-- 1 root wheel 188 Dec  7 04:01 distinfo
-rw-r--r-- 1 root wheel 215 Dec 14  2004 pkg-descr
-rw-r--r-- 1 root wheel 267 Dec 22  2004 pkg-plist
```

```
laur# cat pkg-descr
```

This is just a simple frontend module for autobuilding of various Digest::modules. It also provide documentation of the interface that all Digest::modules should provide.

WWW: <http://search.cpan.org/dist/Digest/>

```
laur# cat distinfo
```

```
MD5 (Digest-1.14.tar.gz) = b3e2235fe5181de58e3020977c76cfa8
```

```
SHA256 (Digest-1.14.tar.gz) = c77eb061578721c1cc0f7fc21cd3be7b3114cc4d03caf513fdd682e6287f855
```

```
SIZE (Digest-1.14.tar.gz) = 7374
```

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```
lemur# cat pkg-plist
%%SITE_PERL%%/%%PERL_ARCH%%/auto/Digest/.packlist
%%SITE_PERL%%/Digest.pm
%%SITE_PERL%%/Digest/base.pm
%%SITE_PERL%%/Digest/file.pm
@unexec rmdir %D/%%SITE_PERL%%/Digest 2>/dev/null || true
@unexec rmdir %D/%%SITE_PERL%%/%%PERL_ARCH%%/auto/Digest 2>/dev/null || true
```

FreeBSD ports



```
# New ports collection makefile for: Digest
# Date created: 28 May 2002
# Whom: Sergey Skvortsov <skv@protey.ru>
#
# $FreeBSD: ports/security/p5-Digest/Makefile,v 1.14 2005/12/06 16:21:38 skv Exp $
#
PORTNAME= Digest
PORTVERSION= 1.14
CATEGORIES= security perl5
MASTER_SITES= ${MASTER_SITE_PERL_CPAN}
MASTER_SITE_SUBDIR= Digest
PKGNAMEPREFIX= p5-

MAINTAINER= skv@FreeBSD.org
COMMENT= Modules that calculate message digests

BUILD_DEPENDS= ${SITE_PERL}/${PERL_ARCH}/MIME/Base64.pm:${PORTSDIR}/converters/p5-MIME-Base64
RUN_DEPENDS= ${BUILD_DEPENDS}

PERL_CONFIGURE= yes

MAN3= Digest.3 Digest::base.3 Digest::file.3

.include <bsd.port.mk>
```

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```
> pwd
/usr/ports/Mk
> ls
bsd.apache.mk          bsd.gstreamer.mk     bsd.port.pre.mk
bsd.autotools.mk      bsd.java.mk          bsd.port.subdir.mk
bsd.database.mk       bsd.kde.mk           bsd.python.mk
bsd.emacs.mk          bsd.openssl.mk      bsd.ruby.mk
bsd.gcc.mk            bsd.php.mk           bsd.sdl.mk
bsd.gnome.mk          bsd.port.mk          bsd.sites.mk
bsd.gnustep.mk        bsd.port.post.mk    bsd.tcl.mk
```

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Patching

Makefile:

```
USE_REINPLACE= YES
post-patch:
    @${REINPLACE_CMD} -e 's| install-docDATA | |g' ${WRKSRC}/Makefile.in
```

En patch fil:

Placeres i FILESDIR, som defaulter til `${PORTSDIR}/files`, og filnavnet starter med 'patch-' efterfulgt af den fil der patches, f.eks. 'files/patch-src-Commit.cpp'

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Hjertet af koden ligger i `bsd.port.mk` og er over 6000 linier.

Portmgr "ejer" koden og alle funktionelle ændringer kræver et fuld run på clusteret.

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```
#
# PORTNAME      - Name of software.  Mandatory.
# PORTVERSION   - Version of software.  Mandatory when no DISTVERSION is given.
# PORTREVISION  - Version of port.  Optional.  Commonly used to indicate
#                that an update has happened that affects the port
#                framework itself, but not the distributed software
#                (e.g., local patches or Makefile changes).
#
#
# These variable describe how to fetch files required for building the port.
#
# DISTFILES     - Name(s) of archive file(s) containing distribution.
#                Set this to an empty string if the port doesn't require it.
#                Default: ${DISTNAME}${EXTRACT_SUFX}
# EXTRACT_SUFX - Suffix for archive names
#                You never have to set both DISTFILES and EXTRACT_SUFX.
#                Default: .tar.bz2 if USE_BZIP2 is set, .zip if USE_ZIP is
#                set, .tar.gz otherwise).
# MASTER_SITES - Primary location(s) for distribution files if not found
#                locally.  See bsd.sites.mk for common choices for
#                MASTER_SITES.
#
```

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```
> grep CPAN bsd.sites.mk
.if !defined(IGNORE_MASTER_SITE_PERL_CPAN)
MASTER_SITE_PERL_CPAN+= \
    ftp://ftp.funet.fi/pub/languages/perl/CPAN/modules/by-module/%SUBDIR%/ \
    ftp://ftp.cpan.org/pub/CPAN/modules/by-module/%SUBDIR%/ \
    http://www.cpan.dk/CPAN/modules/by-module/%SUBDIR%/ \
....

# OSVERSION                - The value of __FreeBSD_version.

.if !defined(OSVERSION)
.if exists(/sbin/sysctl)
OSVERSION!=                /sbin/sysctl -n kern.osreldate
.else
OSVERSION!=                /usr/sbin/sysctl -n kern.osreldate
.endif
.endif
```

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```
> more /usr/ports/devel/allegro/Makefile
....

.include <bsd.port.pre.mk>

.if ${ARCH} == "alpha" && ${OSVERSION} < 500000
EXTRA_PATCHES=  ${FILESDIR}/extra-patch-include-allegro-inline-fmaths.in
.endif

...

.include <bsd.port.post.mk>
```

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Filer i /usr/ports

- LEGAL - Ports med restriktive licenser som ikke må distribueres via ftp og/eller cd'er.
- KNOBS - Generelty variabler brugt af mange porte til options.
- INDEX - Index af alle porte med deres beskrivelse, kategorier, afhængigheder, m.m. brugt af f.eks. 'make search'.
- UPDATING - Information til brugerne når der skal gøres noget specielt ved opgradering af en port.
- CHANGES - Information til udviklerne når der er sket noget specielt ved en opgradering af en port.
- UIDs/GIDs - Bruger- og gruppe ID som en specifik port bruger.

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OPTIONS

```
OPTIONS=      ARTS "Enable Arts support" off \  
              DEBUG_LIB "Build debugging library" off \  
              DEV_UTILS "Build development utilities" on \  
              ESOUND "Enable Esound support" off \  
              OPTIMIZED_CFLAGS "Enable compilation optimizations" on \  
              PROFILE_LIB "Build profiling library" off \  
              THREADS "Enable threads" on
```

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OPTIONS

```
.if defined(WITH_DEBUG_LIB)
CONFIGURE_ARGS+=      --enable-dbglib
PLIST_SUB+=          DEBUG_LIB=""
.else
CONFIGURE_ARGS+=      --disable-dbglib
PLIST_SUB+=          DEBUG_LIB="@comment "
.endif
```

pkg-plist:

```
%%DEBUG_LIB%%lib/liballd.so
%%DEBUG_LIB%%lib/liballd.so.%%SHLIB_VER%%
%%DEBUG_LIB%%lib/liballd_unsharable.a
```

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Testing

Portmgr kører løbende tests på forskellige architecture og versioner på clusterne. Ved fejl bliver der sendt en mail til maintaineren og den sidste committer. Maintainer får også mail hvis DISTFILE ikke kan hentes og hvis der findes en nyere version af softwaren end der ligger i ports.

<http://pointyhat.FreeBSD.org>

<http://portsmon.FreeBSD.org>

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Testing

Tinderbox er en samling shell skripts baseret på koden bag pointyhat, som man kan bruge for at teste sine porte med.

- chroot
- forskellige userland versioner
- tester om pkg-plist passer
- genkender gænge fejl
- bygger pakker

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□ Droso Tinderbox - Mozilla

File Edit View Go Bookmarks Tools Window Help

Latest Builds

Build	Port Directory	Version	Reason	Last Build Attempt	Last Successful Build
7.0-FreeBSD	www/p5-HTML-TableExtract	p5-HTML-TableExtract-2.06	log package	2006-01-07 12:25:09	2006-01-07 12:25:09
7.0-FreeBSD	www/p5-HTML-Parser	p5-HTML-Parser-3.48	log package	2006-01-07 12:21:22	2006-01-07 12:21:22
7.0-FreeBSD	devel/p5-Test-Simple	p5-Test-Simple-0.62	log package	2006-01-07 12:17:39	2006-01-07 12:17:40
7.0-FreeBSD	net/p5-URI	p5-URI-1.35	log package	2006-01-07 12:13:51	2006-01-07 12:13:52
7.0-FreeBSD	devel/p5-Test-Harness	p5-Test-Harness-2.56	log package	2006-01-07 12:10:05	2006-01-07 12:10:05
7.0-FreeBSD	www/p5-HTML-Tagset	p5-HTML-Tagset-3.10	log package	2006-01-07 12:06:26	2006-01-07 12:06:26
4.11-FreeBSD	www/p5-HTML-TableExtract	p5-HTML-TableExtract-2.06	log package	2006-01-07 12:01:08	2006-01-07 12:01:08
4.11-FreeBSD	www/p5-HTML-Parser	p5-HTML-Parser-3.48	log package	2006-01-07 12:00:41	2006-01-07 12:00:41
4.11-FreeBSD	devel/p5-Test-Simple	p5-Test-Simple-0.62	log package	2006-01-07 12:00:14	2006-01-07 12:00:15
4.11-FreeBSD	devel/p5-Test-Harness	p5-Test-Harness-2.56	log package	2006-01-07 11:59:49	2006-01-07 11:59:49
4.11-FreeBSD	net/p5-URI	p5-URI-1.35	log package	2006-01-07 11:59:26	2006-01-07 11:59:26
4.11-FreeBSD	textproc/p5-Pod-Parser	p5-Pod-Parser-1.34	log package	2006-01-07 11:59:01	2006-01-07 11:59:01
4.11-FreeBSD	converters/p5-MIME-Base64	p5-MIME-Base64-3.07	log package	2006-01-07 11:58:35	2006-01-07 11:58:35
4.11-FreeBSD	devel/p5-PathTools	p5-PathTools-3.15	log package	2006-01-07 11:58:08	2006-01-07 11:58:09

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Links

- <http://FreeBSD.org/ports/>
- <http://FreeBSD.org/portmgr/>
- <http://portsmon.FreeBSD.org/>
- FreeBSD Handbook: <http://FreeBSD.org/handbook/>
- <http://www.freshports.org/>
- <http://tinderbox.marcuscom.com>

<http://people.freebsd.org/~erwin/presentations/>

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