

Installing the Common Desktop Environment on FreeBSD

WARNING: THIS GUIDE IS FOR ADVANCED USERS FOR USE IN BUILDING AND PORTING.

Note: Compilation with system clang is now supported on FreeBSD 10 and later

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Supported Versions

These instructions have been successfully tested on:

FreeBSD 12.3-RELEASE aarch64 (Raspberry Pi3)

FreeBSD 12.3-RELEASE x86_64

FreeBSD 12.4-RELEASE aarch64 (Raspberry Pi3)

FreeBSD 12.4-RELEASE x86_64

FreeBSD 12-STABLE x86_64

FreeBSD 13.1 x86_64

FreeBSD 13-STABLE x86_64

FreeBSD 14.0-CURRENT x86_64

First steps

Install FreeBSD 12-RELEASE or FreeBSD 13-RELEASE and install/update your ports tree.

```
freebsd-update fetch
```

```
freebsd-update install
```

reboot.

Complete install documentation can be found in the FreeBSD Handbook.

If you plan to install the dependencies from source, fetch the current ports tree and build the portmaster utility:

```
portsnap fetch extract update
```

```
cd /usr/ports/ports-mgmt/portmaster
```

```
make -DBATCH install clean
```

Install packages

Install packages from source

the source packages can be built and installed using the following sequence

```
portmaster -C -D --no-confirm -y \
```

```
x11/xorg \
```

```
devel/git \
```

```
converters/iconv \
```

```
shells/ksh93 \
```

x11-toolkits/open-motif \

lang/tcl86

textproc/opensp

If you don't want to wade through the many configuration steps and build with the standard configuration instead, add the `-G` parameter to portmaster.

More information about ports and packages can be found in the FreeBSD Handbook Ports chapter. More information about X11 in FreeBSD can also be found in the X11 Chapter in the FreeBSD Handbook.

Install binary packages

To install precompiled binary packages, make the following call

```
pkg install cde xorg
```

If you wish to track the CDE development branch,

```
pkg install cde-devel xorg
```

The development branch is updated monthly though it may be updated more frequently.

Edit `/etc/rc.conf`

Add to `/etc/rc.conf`

```
rpcbind_enable="YES"
```

```
inetd_enable="YES"
```

Reboot

Clone or download the source code

Use the git clone command here:

On most platform you can use HTTPS:

```
git clone https://git.code.sf.net/p/cdesktopenv/code cdesktopenv-code
```

If that doesn't work (for instance some BSD distros) , use the native git protocol instead

```
git clone git://git.code.sf.net/p/cdesktopenv/code cdesktopenv-code
```

Or download the latest source release:

Note: The source archive will become out of date. When you want the latest code, clone the git repository.

Build CDE

Version 2.5.0 and newer (autoconf)

For the BSD's, you must use gmake, and you must specify the location of the TCL install directory (the below example assumes TCL v8.6).

```
$ ./autogen.sh
```

```
$ ./configure --with-tcl=/usr/local/lib/tcl8.6 MAKE="gmake"
```

```
$ gmake
```

```
$ sudo gmake install
```

Version 2.4.0 and earlier (imake) - deprecated

```
cd cdesktopenv-code/cde
```

```
make World
```

```
admin/IntegTools/dbTools/installCDE -s `pwd`
```

Start CDE

You can now start CDE login manager as root:

```
/usr/dt/bin/dtlogin -nodaemon
```

Alternatively, you can start an X session as a normal user:

```
startx /usr/dt/bin/Xsession
```

Install dtlogin as Login Manager

Switch to the CDE build directory and copy and enable the rc-file

```
cp contrib/rc/freebsd/dtlogin /usr/local/etc/rc.d/
```

```
echo 'dtlogin_enable="YES"' >> /etc/rc.conf
```

```
echo "allowed_users=anybody" > /usr/local/etc/X11/Xwrapper.config
```

```
reboot
```

Starting the CDE login manager on boot--Add the following line to /etc/rc.local:

Code:

`/usr/local/dt/bin/dtlogin`

If you want to change the logo image on the login screen, change the following value in `/usr/local/dt/config/C/Xresources`:

Code:

`Dtlogin*logo*bitmapFile:`

Here you can specify a direct path to a .bm or .pm file. Instead of changing the Xresources file you can always just replace the file it uses with another of the same name. You will find it at: `/usr/local/dt/appconfig/icons/C/FreeBSDdtlogo.pm` This image is 237x237 pixels. Setting up the CDE Calendar--Add these lines to `/etc/inetd.conf`:

Code:

```
dtspc stream tcp4  nowait root  /usr/local/dt/bin/dtspcd /usr/local/dt/bin/dtspcd
cmsd/2-5  dgram rpc/udp4 wait root /usr/local/dt/bin/rpc.cmsd rpc.cmsd
```

Add these lines to `/etc/rc.conf`:

Code:

```
rpcbind_enable="YES"
inetd_enable="YES"
```

Add this line to `/etc/hosts`:

Code:

127.0.0.1 HOSTNAME

(not just localhost but your actual hostname)Configuring workspace switching with the keyboard--These configurations are done in ~/.dt/dtwmrcPut these in the "Keys DtKeyBindings" section:

Code:

```
Ctrl<Key>Left root|window|icon f.next_workspace
```

```
Ctrl<Key>Right root|window|icon f.prev_workspace
```

For switching to specific workspaces:

Code:

```
Mod4<Key>1 root|window|icon f.goto_workspace "ws0"
```

```
Mod4<Key>2 root|window|icon f.goto_workspace "ws1"
```

```
Mod4<Key>3 root|window|icon f.goto_workspace "ws2"
```

```
Mod4<Key>4 root|window|icon f.goto_workspace "ws3"
```

Mod4 is the Windows key. ws0..3 are the internal names of the workspaces, so these will work regardless of what you name the workspaces on the panel. Adding programs to the panel--Download icon image file, set size to 32x32 pixels, save as .xpm if the icon is going to be directly on the panel and not in a submenu then make 48x48 instead Move .xpm file to ~/.dt/icons (or wherever you want) as a .pm file Start "Create Action" in Desktop Apps Name the action Enter the command to be executed when clicking the icon Click "Edit icon" In the Icon Editor, go to File -> Open and open the .pm icon file Click File -> Save and close Icon Editor In the Create Action window, click File -> Save The new action will be saved in your home folder Move the action file Open the File Manager to the location of the action Expand the Personal Applications submenu on the dock Drag the action file from the File Manager to the Install Icon location on the submenu Restart Workspace Manager to arrange the icon alphabetically in the submenu The built-in CDE applications--Overview of some of the applications that come with CDE. Terminal- Basic terminal, works fine. Text Editor- Simple text editor. Calculator- This program crashes whenever you change modes, needs work. Calendar- Quite a robust a full-featured calendar application, has been reported to have some stability issues. Icon Editor- A great little program for creating icons, I recommend trying it out for some quick and dirty icons for applications you want to

put on the panel. Mailer- This is an ancient email application that will need a lot of work to become usable. Technically you can set it up to work using sendmail but I have not tried. Don't expect modern fanciness like security or HTML rendering.

Information Manager- A very impressive amount of documentation. This is one of those signs that this was at one point commercial software. Style Manager- This is not one program but a group of programs that change window colors, desktop background (or backdrop in CDE speak), screensavers etc. Some applications to try that mesh well with CDE--Here are some applications that use Motif and/or mesh with the overall look and feel of

CDE: [graphics/xvgraphics](#)/[xpdf3astro](#)/[xephemastro](#)/[xmoontoolgames](#)/[xshisen](#) EDIT: Some more applications to check out: [audio/xmcdaudio](#)/[xmmixeditors](#)/[nedit](#)