

FreeBSD Installation

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READ THE INSTRUCTIONS

These slides contain explicit instructions to allow you to successfully install FreeBSD and Gnome on your machines.

If you do not read the instructions on these slides and/or do not pay attention to what is chosen in the screens during installation you are very likely to install incorrectly.

So:

READ THE INSTRUCTIONS

You instructors thank you :-)

Boot Off DVD

- Insert the FreeBSD 8.0 CD into your CD-ROM drive and (re)boot the machine. You may need to power cycle.



Installation: How to use the keyboard

Please follow the steps exactly as described

FreeBSD Installer Keyboard Usage

1. Use the **SPACE** key to choose highlighted options.
2. Use the **TAB** key to move to confirmations such as “<**OK**>”, then press **ENTER**.

Generally **don't use** the ENTER key to select options, such as items to install. This **will not work!** Instead, you will **deselect** what you wish to install.

Installation: How to use the Keyboard

Please follow the steps exactly as described

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Installation: How to use the Keyboard

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FreeBSD Installer Keyboard Usage

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2. Use the **TAB** key to move to confirmations such as “<OK>”, then press **ENTER**.

Generally **don't use** the ENTER key to select options, such as items to install. This **will not work!** Instead, you will **deselect** what you wish to install.

Not following these steps is the number one problem people encounter when installing FreeBSD.

Select Your Country

Please choose “Rwanda” not “Egypt”

Country Selection

Please choose a country, region, or group.
Select an item using [SPACE] or [ENTER].

↑(-)

64	Ecuador
65	Egypt
66	El Salvador
67	Equatorial Guinea
68	Eritrea
69	Estonia
70	Ethiopia
71	Falkland Islands
72	Faroe Islands
73	Fiji
74	Finland
75	France
76	French Guiana
77	French Polynesia

↓(+)

[OK] Cancel

Select Keyboard

System Console Keymap

The default system console driver for FreeBSD (syscons) defaults to a standard "American" keyboard map. Users in other countries (or with different keyboard preferences) may wish to choose one of the other keymaps below.

Note that sysinstall itself only uses the part of the keyboard map which is required to generate the ANSI character subset, but your choice of keymap will also be saved for later (fuller) use.

^(-)	
UK ISO	UK ISO keymap
Ukrainian KOI8-U	Ukrainian KOI8-U keymap
Ukrainian KOI8-U+KOI8-R	Ukrainian KOI8-U+KOI8-R keymap (alter)
USA CapsLock→Ctrl	US standard (Caps as L-Control)
USA Dvorak	US Dvorak keymap
USA Dvorak (left)	US left handed Dvorak keymap
USA Dvorak (right)	US right handed Dvorak keymap
USA Emacs	US standard optimized for EMACS
USA ISO	US ISO keymap
v(+)	

[**OK**]

Cancel

[**Choose a keyboard map**]

Select to Install FreeBSD

```
FreeBSD/i386 8.0-RELEASE - sysinstall Main Menu
Welcome to the FreeBSD installation and configuration tool. Please
select one of the options below by using the arrow keys or typing the
first character of the option name you're interested in. Invoke an
option with [SPACE] or [ENTER]. To exit, use [TAB] to move to Exit.

Usage          Quick start - How to use this menu system
Standard      Begin a standard installation (recommended)
Express       Begin a quick installation (for experts)
Custom        Begin a custom installation (for experts)
Configure     Do post-install configuration of FreeBSD
Doc           Installation instructions, README, etc.
Keymap        Select keyboard type
Options       View/Set various installation options
Fixit         Repair mode with CDROM/DVD/floppy or start shell
Upgrade       Upgrade an existing system
Load Config.. Load default install configuration
Index        Glossary of functions

[ Select ]    X Exit Install
```

Use the **tab** key to select “Select” then **enter** to continue.

Click OK to continue

```
Message
In the next menu, you will need to set up a DOS-style ("fdisk") partitioning
scheme for your hard disk.  If you simply wish to devote all disk space
to FreeBSD (overwriting anything else that might be on the disk(s) selected)
then use the (A)ll command to select the default partitioning scheme followed
by a (Q)uit.  If you wish to allocate only free space to FreeBSD, move to a
partition marked "unused" and use the (C)reate command.
(100%)
[ OK ]
[ Press enter or space ]
```

How Much of the Disk to Use

```
Disk name:      ad0                      FDISK Partition Editor
DISK Geometry: 88768 cyls/15 heads/63 sectors = 83885760 sectors (40959MB)

Offset          Size(ST)          End          Name  PType          Desc  Subtype  Flags
-----
0              83886080         83886079    -     12            unused  0

The following commands are supported (in upper or lower case):

A = Use Entire Disk      G = set Drive Geometry    C = Create Slice      F = 'DD' mode
D = Delete Slice         Z = Toggle Size Units     S = Set Bootable     : = Wizard M.
T = Change Type          U = Undo All Changes      Q = Finish
```

Use F1 or ? to get more help, arrow keys to select.

We will use our Entire Disk. Press “A” to do this.

Using the Entire Disk for FreeBSD

```
FDISK Partition Editor
Disk name: ad0
DISK Geometry: 88768 cyls/15 heads/63 sectors = 83885760 sectors (40959MB)

Offset      Size(ST)      End      Name  PType      Desc  Subtype  Flags
-----
      0         63         62      -     12      unused      0
      63  83885697  83885759  ad0s1  8      freebsd     165
 83885760    320    83886079  -     12      unused      0

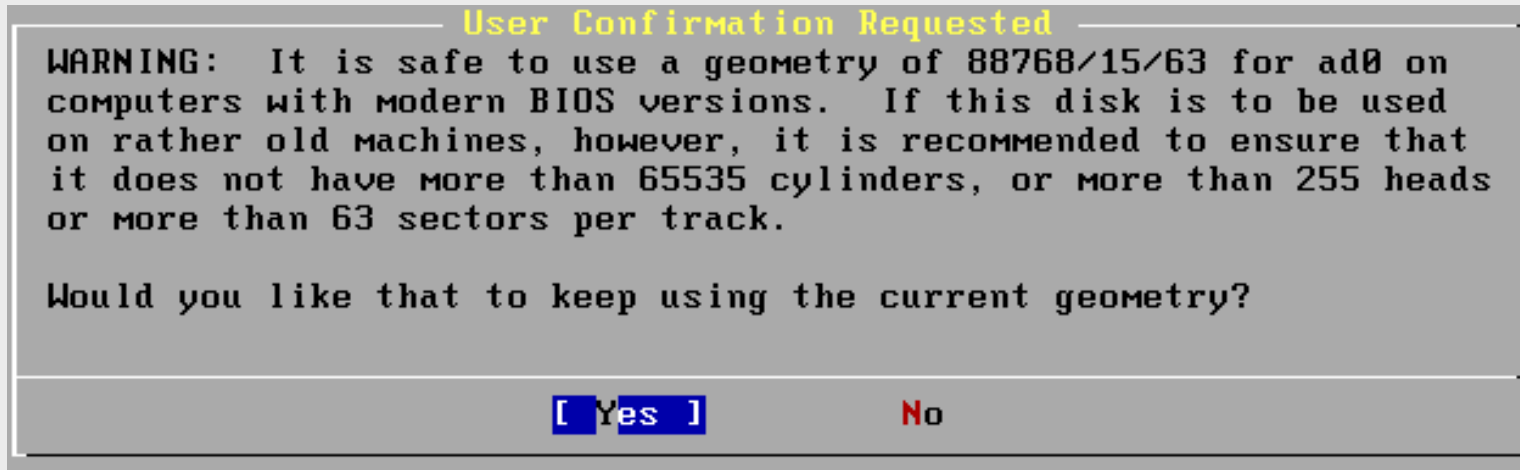
The following commands are supported (in upper or lower case):

A = Use Entire Disk    G = set Drive Geometry    C = Create Slice    F = 'DD' mode
D = Delete Slice      Z = Toggle Size Units    S = Set Bootable    ; = Wizard M.
T = Change Type      U = Undo All Changes    Q = Finish

Use F1 or ? to get more help, arrow keys to select.
```

We chose the entire disk. Now press “Q” to leave this screen and continue with installation.

Confirm Geometry of Disk



If you see this warning...

We select "Yes" as our machines are "modern"

Options to Boot Your Machine

```
Install Boot Manager for drive ad0?

FreeBSD comes with a boot manager that allows you to easily
select between FreeBSD and any other operating systems on your machine
at boot time.  If you have more than one drive and want to boot
from the second one, the boot manager will also make it possible
to do so (limitations in the PC BIOS usually prevent this otherwise).
If you will only have FreeBSD on the machine the boot manager is
not needed and it slows down the boot while offering you the choice
of which operating system to boot.  If you do not want a boot
manager, or wish to replace an existing one, select "standard".
If you would prefer your Master Boot Record remain untouched then
select "None".

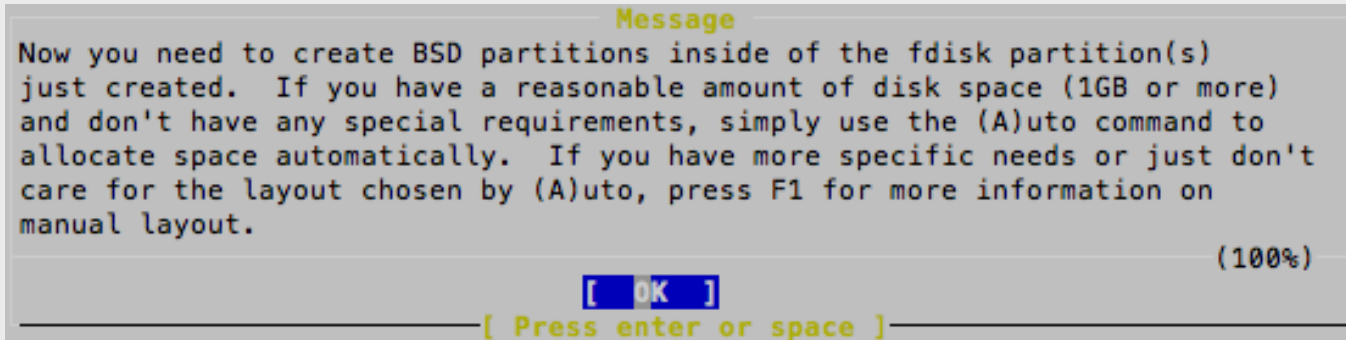
NOTE:  PC-DOS users will almost certainly require "None"!

Standard  Install a standard MBR (no boot manager)
BootMgr   Install the FreeBSD Boot Manager
None      Leave the Master Boot Record untouched

[ OK ]      Cancel
[ Press F1 to read about drive setup ]
```

If you have more than one Operating System on your machine, then you may want to choose “BootMgr”. In our case our machines will only have FreeBSD, so select “Standard”, tab to “OK” and press **enter**.

Click OK to continue



Now “Slice Up” your Disk (Partition)

```
FreeBSD Disklabel Editor
Disk: ad0      Partition name: ad0s1      Free: 83885697 blocks (40959MB)
Part          Mount          Size Newfs      Part          Mount          Size Newfs
-----
The following commands are valid here (upper or lower case):
C = Create      D = Delete      M = Mount pt.
N = Newfs Opts  Q = Finish      S = Toggle SoftUpdates  Z = Custom Newfs
T = Toggle Newfs U = Undo      A = Auto Defaults      R = Delete+Merge
Use F1 or ? to get more help, arrow keys to select.

```

The entire Disk is our FreeBSD partition. We now slice up our partition. Note that “ad0” is chosen by default.

Now “Slice Up” your Disk (Partition)

```
FreeBSD Disklabel Editor
Disk: ad0      Partition name: ad0s1      Free: 0 blocks (0MB)

Part      Mount      Size Newfs      Part      Mount      Size Newfs
----      -
ad0s1a    /           512MB UFS2      Y
ad0s1b    swap        2254MB SWAP
ad0s1d    /var        2151MB UFS2+S   Y
ad0s1e    /tmp        512MB  UFS2+S   Y
ad0s1f    /usr        35529MB UFS2+S   Y

The following commands are valid here (upper or lower case):
C = Create      D = Delete      M = Mount pt.
N = Newfs Opts  Q = Finish      S = Toggle SoftUpdates  Z = Custom Newfs
T = Toggle Newfs U = Undo      A = Auto Defaults      R = Delete+Merge

Use F1 or ? to get more help, arrow keys to select.
█
```

- Choose “Auto Defaults” by pressing “A”, then exit the screen by pressing “Q”.
- We will let the installer **partition our slice** for us. But, you can specify this any way you want. This is a *very important* step in the installation.

Install Kern-Developer

```
Choose Distributions
As a convenience, we provide several "canned" distribution sets.
These select what we consider to be the most reasonable defaults for the
type of system in question.  If you would prefer to pick and choose the
list of distributions yourself, simply select "Custom".  You can also
pick a canned distribution set and then fine-tune it with the Custom item.

Choose an item by pressing [SPACE] or [ENTER].  When finished, choose the
Exit item or move to the OK button with [TAB].

<<< X Exit          Exit this menu (returning to previous)
      All           All system sources and binaries
      Reset        Reset selected distribution list to nothing
[ ] 4 Developer    Full sources, binaries and doc but no games
[ ] 5 Kern-Developer Full binaries and doc, kernel sources only
[ ] 6 User        Average user - binaries and doc only
[ ] A Minimal     The smallest configuration possible
> > B Custom      Specify your own distribution set

[ OK ]          Cancel
[ Press F1 for more information on these options. ]
```

CAREFUL! You must do these steps exactly as follows:

- 1) Select "Kern-Developer"
- 2) Press the **SPACE** bar (*Do not press enter!*)

Install English Documentation

```
FreeBSD Documentation Installation Menu
This menu will allow you to install the whole documentation set
from the FreeBSD Documentation Project: Handbook, FAQ and articles.

Please select the language versions you wish to install. At minimum,
you should install the English version, this is the original version
of the documentation.

<<< X Exit  Exit this menu (returning to previous)
      All   Select all below
[ ] bn    Bengali Documentation
[ ] da    Danish Documentation
[ ] de    German Documentation
[ ] el    Greek Documentation
[X] en    English Documentation (recommended)
[ ] es    Spanish Documentation
[ ] fr    French Documentation
[ ] hu    Hungarian Documentation
[ ] it    Italian Documentation
[ ] ja    Japanese Documentation
      v(+)
```

[OK] Cancel

- 1) Move your cursor to “English Documentation” and press the **SPACE** bar (not enter!)
- 2) Press the **TAB** key to highlight “OK” and then press **ENTER**

Install Ports – BIG Software Collection

```
----- User Confirmation Requested -----  
Would you like to install the FreeBSD ports collection?  
  
This will give you ready access to over 19,000 ported software packages,  
at a cost of around 445MB of disk space when "clean" and possibly  
much more than that when a lot of the distribution tarballs are loaded  
(unless you have the extra discs available from a FreeBSD CD/DVD distribution  
and can mount them on /cdrom, in which case this is far less of a problem).  
  
The ports collection is a very valuable resource and well worth having  
on your /usr partition, so it is advisable to say Yes to this option.  
  
For more information on the ports collection & the latest ports, visit:  
http://www.freebsd.org/ports  
  
[ Yes ]      No
```

Select "Yes" and press **enter**.

Choosing Distribution Part 2

```
Choose Distributions

As a convenience, we provide several "canned" distribution sets.
These select what we consider to be the most reasonable defaults for the
type of system in question. If you would prefer to pick and choose the
list of distributions yourself, simply select "Custom". You can also
pick a canned distribution set and then fine-tune it with the Custom item.

Choose an item by pressing [SPACE] or [ENTER]. When finished, choose the
Exit item or move to the OK button with [TAB].

<<< X Exit          Exit this menu (returning to previous)
  All              All system sources and binaries
  Reset           Reset selected distribution list to nothing
[X] 4 Developer    Full sources, binaries and doc but no games
[ ] 5 Kern-Developer Full binaries and doc, kernel sources only
[ ] 6 User         Average user - binaries and doc only
[ ] A Minimal     The smallest configuration possible
> > B Custom      Specify your own distribution set

[ OK ]          Cancel
[ Press F1 for more information on these options. ]
```

- Now we are returned to our Distribution selection menu
- Select “**X Exit**”
- Now use the **tab** key to select “OK” and press **enter**.

Your Method of Installation

Choose Installation Media

FreeBSD can be installed from a variety of different installation media, ranging from floppies to an Internet FTP server. If you're installing FreeBSD from a supported CD/DVD drive then this is generally the best media to use if you have no overriding reason for using other media.

- | | |
|---------------|---|
| 1 CD/DVD | Install from a FreeBSD CD/DVD |
| 2 FTP | Install from an FTP server |
| 3 FTP Passive | Install from an FTP server through a firewall |
| 4 HTTP | Install from an FTP server through a http proxy |
| 5 DOS | Install from a DOS partition |
| 6 NFS | Install over NFS |
| 7 File System | Install from an existing filesystem |
| 8 Floppy | Install from a floppy disk set |
| 9 Tape | Install from SCSI or QIC tape |
| X Options | Go to the Options screen |

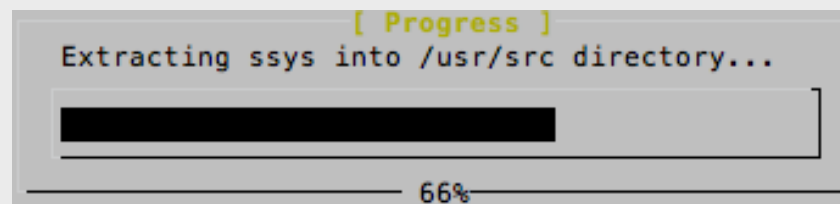
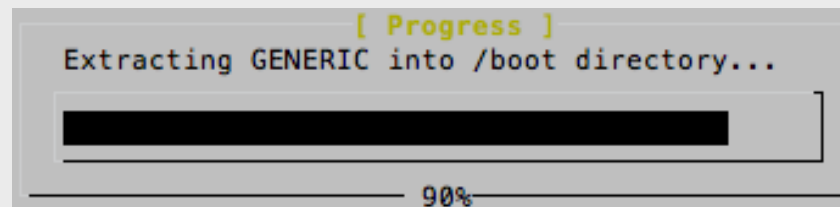
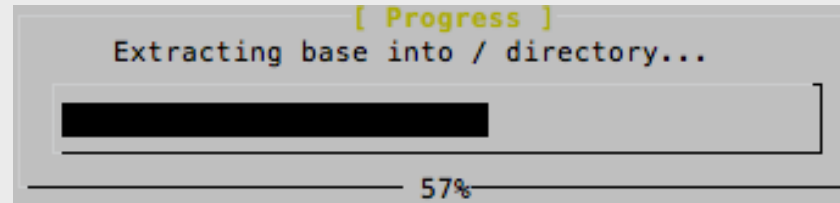
[OK]

Cancel

[Press F1 for more information on the various media types]

Select "CD/DVD", tab to "OK" and press **enter** to continue.

What you'll see on the screen...



Extracting ports into /usr directory...

Initial install finishes

```
Message
Congratulations! You now have FreeBSD installed on your system.

We will now move on to the final configuration questions.
For any option you do not wish to configure, simply select
No.

If you wish to re-enter this utility after the system is up, you
may do so by typing: /usr/sbin/sysinstall.                                     (100%)

[ OK ]
_____ [ Press enter or space ] _____
```

Press ENTER to continue with configuration.

Post Install Configuration

We are now presented with a series of questions about items to configure after installation. Make the selections as shown.

```
----- User Confirmation Requested -----  
Would you like to configure any Ethernet or SLIP/PPP network devices?  
  
[ Yes ]      No
```

Be sure "Yes" is chosen and press **enter** to continue

Choose a Network Interface

```
Network interface information required
If you are using PPP over a serial device, as opposed to a direct
ethernet connection, then you may first need to dial your Internet
Service Provider using the ppp utility we provide for that purpose.
If you're using SLIP over a serial device then the expectation is
that you have a HARDWIRED connection.

You can also install over a parallel port using a special "laplink"
cable to another machine running FreeBSD.

bge0  Broadcom BCM570x PCI Gigabit Ethernet card
plip0  Parallel Port IP (PLIP) peer connection

[ OK ]      Cancel
[ Press F1 to read network configuration manual ]
```

Our hardware is using the “**bge0**” driver for the network interface cards (NICs) installed in our machines. Be sure this is highlighted, use **TAB** to select **OK** and press ENTER.

IPv6

```

----- Network interface information required -----
If you are using PPP over a serial device, as opposed to a direct
ethernet connection, then you may first need to dial your Internet
Service Provider using the ppp utility we provide for that purpose.
If you're using SLIP over a serial device then the expectation is
that you have a HARDWIRED connection.

You can also install over a parallel port using a special "laplink"
cable.

----- User Confirmation Requested -----
Do you want to try IPv6 configuration of the interface?
Yes      [ No ]

ppp0     PPP interface on device /dev/cuad0 (COM1)
s10     SLIP interface on device /dev/cuad1 (COM2)
ppp0     PPP interface on device /dev/cuad1 (COM2)

[ OK ]      Cancel
----- [ Press F1 to read network configuration manual ] -----

```

Select "No" and press **enter**. We may configure IPv6 later in the week.

Use DHCP for Network?

```
----- Network interface information required -----
If you are using PPP over a serial device, as opposed to a direct
ethernet connection, then you may first need to dial your Internet
Service Provider using the ppp utility we provide for that purpose.
If you're using SLIP over a serial device then the expectation is
that you have a HARDWIRED connection.

You can also install over a parallel port using a special "laplink"
cable.

----- User Confirmation Requested -----
Do you want to try DHCP configuration of the interface?
Yes          [ No ]

ppp0  PPP interface on device /dev/cuad0 (COM1)
s10   SLIP interface on device /dev/cuad1 (COM2)
ppp0  PPP interface on device /dev/cuad1 (COM2)

[ OK ]      Cancel
----- [ Press F1 to read network configuration manual ] -----
```

Select "No" and press **enter**. We will manually configure our network information as our machines are servers.

Configure Network

Network Configuration

Host: Domain:

IPv4 Gateway: Name server:

Configuration for Interface em0

IPv4 Address: Netmask:

Extra options to ifconfig (usually empty):

Use **TAB** to move between fields. Once done, tab to “**OK**” and press **enter**. Note: change “pcXX” to the actual name of your PC (pc1-pc50).

More Configuration

User Confirmation Requested
Would you like to bring the em0 interface up right now?

Yes No

<= Choose "Yes"

User Confirmation Requested
Do you want this machine to function as a network gateway?

Yes No

User Confirmation Requested
Do you want to configure inetd and the network services that it provides?

Yes No

User Confirmation Requested
Would you like to enable SSH login?

Yes No

<== Choose "Yes" here.

User Confirmation Requested
Do you want to have anonymous FTP access to this machine?

Yes No

More Configuration continued

User Confirmation Requested

Do you want to configure this machine as an NFS server?

Yes

No

User Confirmation Requested

Do you want to configure this machine as an NFS client?

Yes

No

User Confirmation Requested

Would you like to customize your system console settings?

Yes

No

User Confirmation Requested

Would you like to set this machine's time zone now?

Yes

No

Note we choose "Yes" here.

Configuring Time and Time Zone

Select local or UTC (Greenwich Mean Time) clock

Is this machine's CMOS clock set to UTC? If it is set to local time, or you don't know, please choose NO here!

Yes

[No]

Time Zone Selector

Select a region

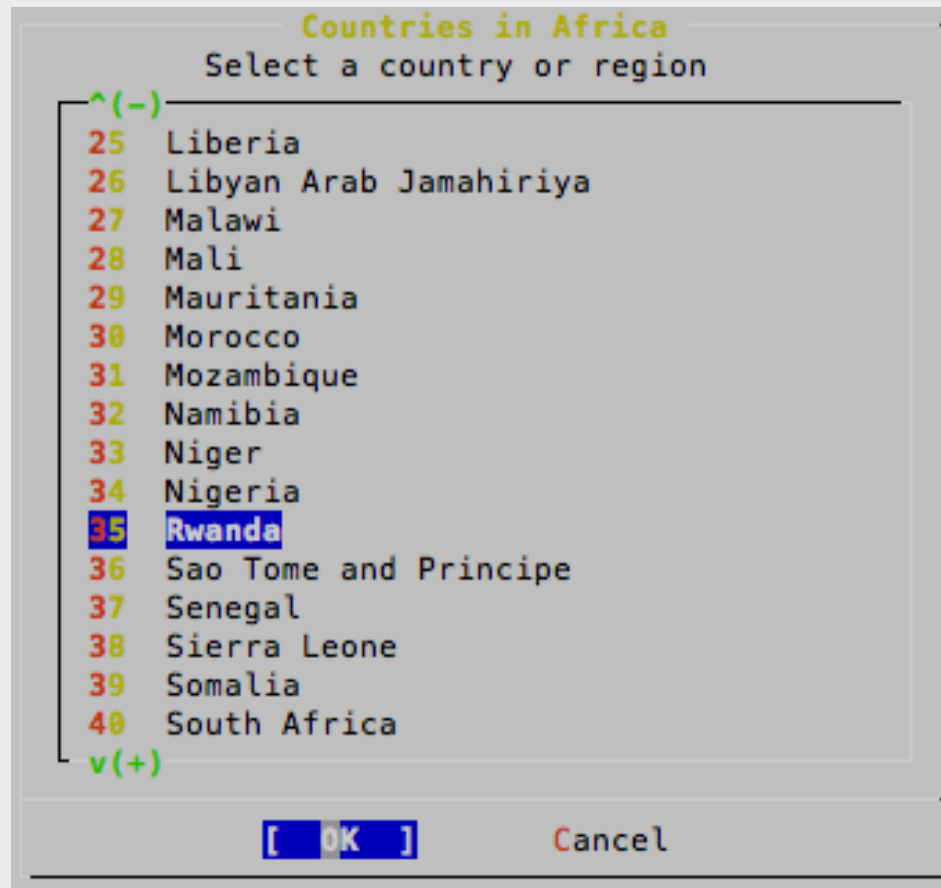
- 1 Africa
- 2 America -- North and South
- 3 Antarctica
- 4 Arctic Ocean
- 5 Asia
- 6 Atlantic Ocean
- 7 Australia
- 8 Europe
- 9 Indian Ocean
- 0 Pacific Ocean

[OK]

Cancel

First select "Africa" to determine what Time Zone we are located in. Tab to "OK" and press **enter**.

Configuring Time Zone



Scroll to “Rwanda”, tab to “OK” and press **enter**.

Configuring time zone cont.

```
Confirmation
Does the abbreviation `CAT' look reasonable?
[ Yes ]      No
```

Select “Yes” and press **enter**.

More Configuration

User Confirmation Requested

Does this system have a PS/2, serial, or bus mouse?

Yes

[No]

User Confirmation Requested

The FreeBSD package collection is a collection of thousands of ready-to-run applications, from text editors to games to WEB servers and more. Would you like to browse the collection now?

Yes

[No]

We will return to the package collection a bit later. For now be sure “No” is selected and press **enter** to continue.

User Configuration

```
----- User Confirmation Requested -----  
Would you like to add any initial user accounts to the system?  
Adding at least one account for yourself at this stage is suggested  
since working as the "root" user is dangerous (it is easy to do  
things which adversely affect the entire system).  
  
Yes      [ No ]
```

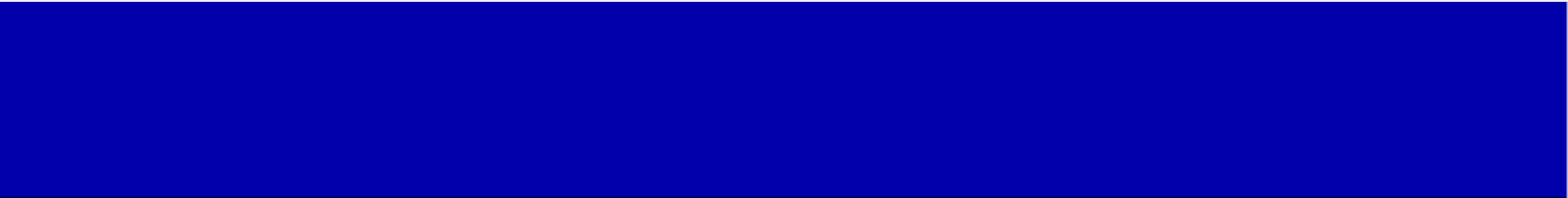
We will create an initial user a bit later. Choose "No" for now.

```
----- Message -----  
Now you must set the system manager's password.  
This is the password you'll use to log in as "root".  
----- (100%) -----  
[ OK ]  
----- [ Press enter or space ] -----
```

```
New Password: [REDACTED]
```

Your class instructor will give you the password.

User Configuration Cont.



```
New Password:  
Retype New Password: █
```

Verify the password. Then you will see...

```
----- User Confirmation Requested -----  
Visit the general configuration menu for a chance to set  
any last options?  
  
Yes [ No ]
```

Select "No" and press **enter** to continue.

Finishing Installation

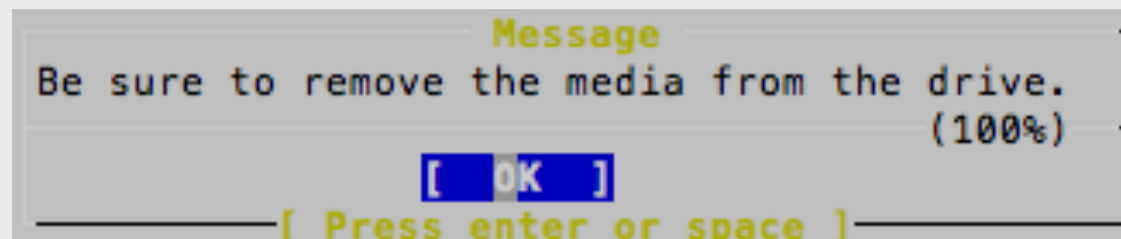
```
FreeBSD/i386 8.0-RELEASE - sysinstall Main Menu
Welcome to the FreeBSD installation and configuration tool. Please
select one of the options below by using the arrow keys or typing the
first character of the option name you're interested in. Invoke an
option with [SPACE] or [ENTER]. To exit, use [TAB] to move to Exit.

  Usage          Quick start - How to use this menu system
  Standard      Begin a standard installation (recommended)
  Express       Begin a quick installation (for experts)
  Custom        Begin a custom installation (for experts)
  Configure     Do post-install configuration of FreeBSD
  Doc           Installation instructions, README, etc.
  Keymap        Select keyboard type
  Options       View/Set various installation options
  Fixit         Repair mode with CDROM/DVD/floppy or start shell
  Upgrade       Upgrade an existing system
  Load Config.. Load default install configuration
  Index         Glossary of functions

Select [X Exit Install]
```

We are back at our original screen. As we are done, select “**Exit Install**” and press **enter**.

Finishing Installation



Select “Yes” and press **enter**. Be sure to remove your FreeBSD 8.0 CD-ROM from your machine.

After rebooting you can log in as “*root*” with the password you were given in class.

Our next set of instructions will lead you through the installation of the Gnome desktop manager, the xorg server and a current version of the Firefox web browser.

This page intentionally left blank.

Installing additional packages

After you have logged in on your machine as the “*root*” user you will be presented with a “#” prompt. At this prompt type the command:

```
# sysinstall
```

You will be presented with the same menu that you saw when starting your FreeBSD installation. This time, however, we are going to do some “post-install configuration of FreeBSD”.

Continue ==>

Installing additional packages

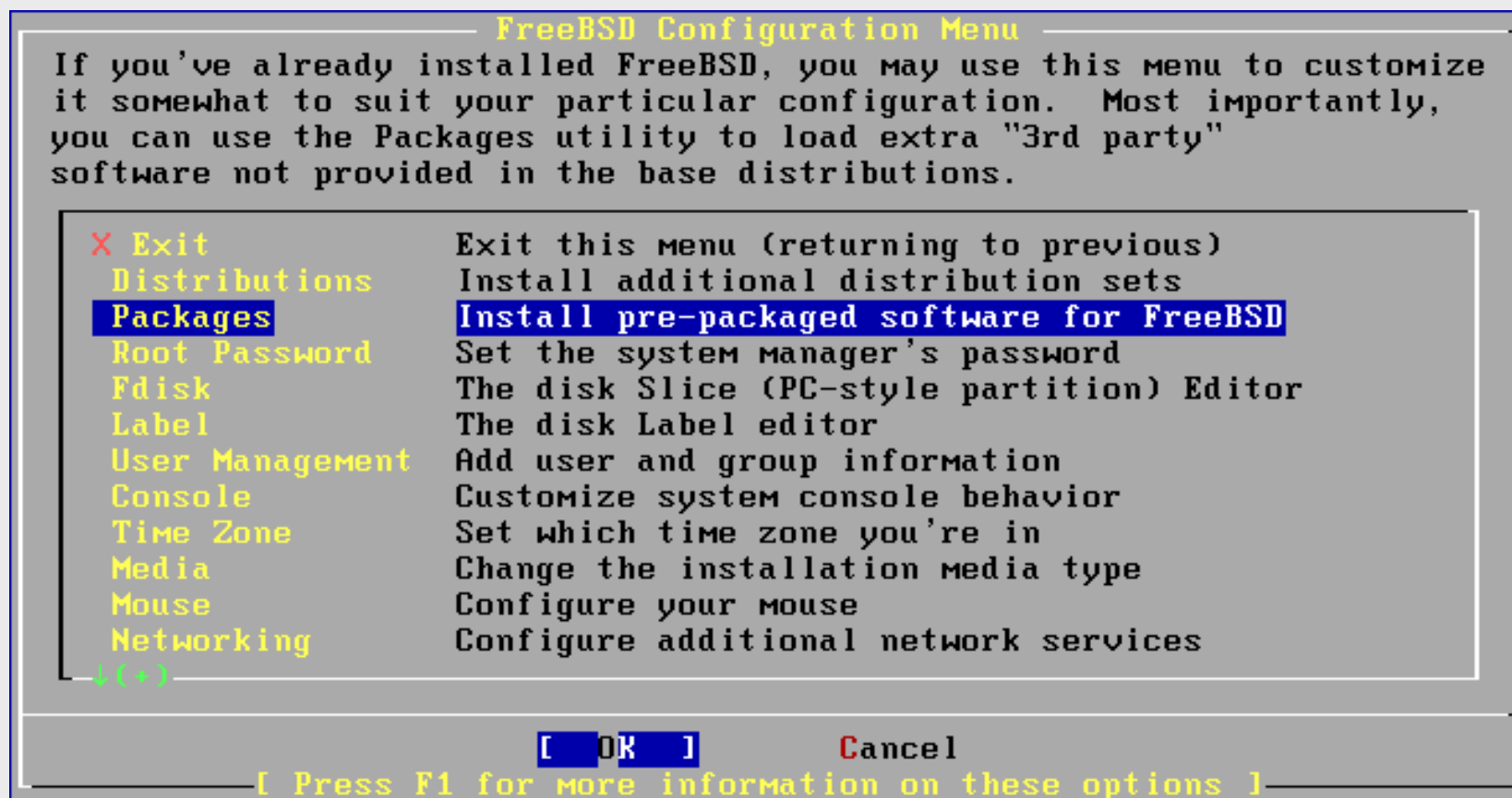
```
FreeBSD/i386 8.0-RELEASE - sysinstall Main Menu
Welcome to the FreeBSD installation and configuration tool. Please
select one of the options below by using the arrow keys or typing the
first character of the option name you're interested in. Invoke an
option with [SPACE] or [ENTER]. To exit, use [TAB] to move to Exit.

  Usage          Quick start - How to use this menu system
  Standard      Begin a standard installation (recommended)
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  Configure    Do post-install configuration of FreeBSD
  Doc           Installation instructions, README, etc.
  Keymap        Select keyboard type
  Options       View/Set various installation options
  Fixit         Repair mode with CDRom/DVD/floppy or start shell
  Upgrade       Upgrade an existing system
  Load Config.. Load default install configuration
  Index         Glossary of functions

                [ Select ]      X Exit Install
```

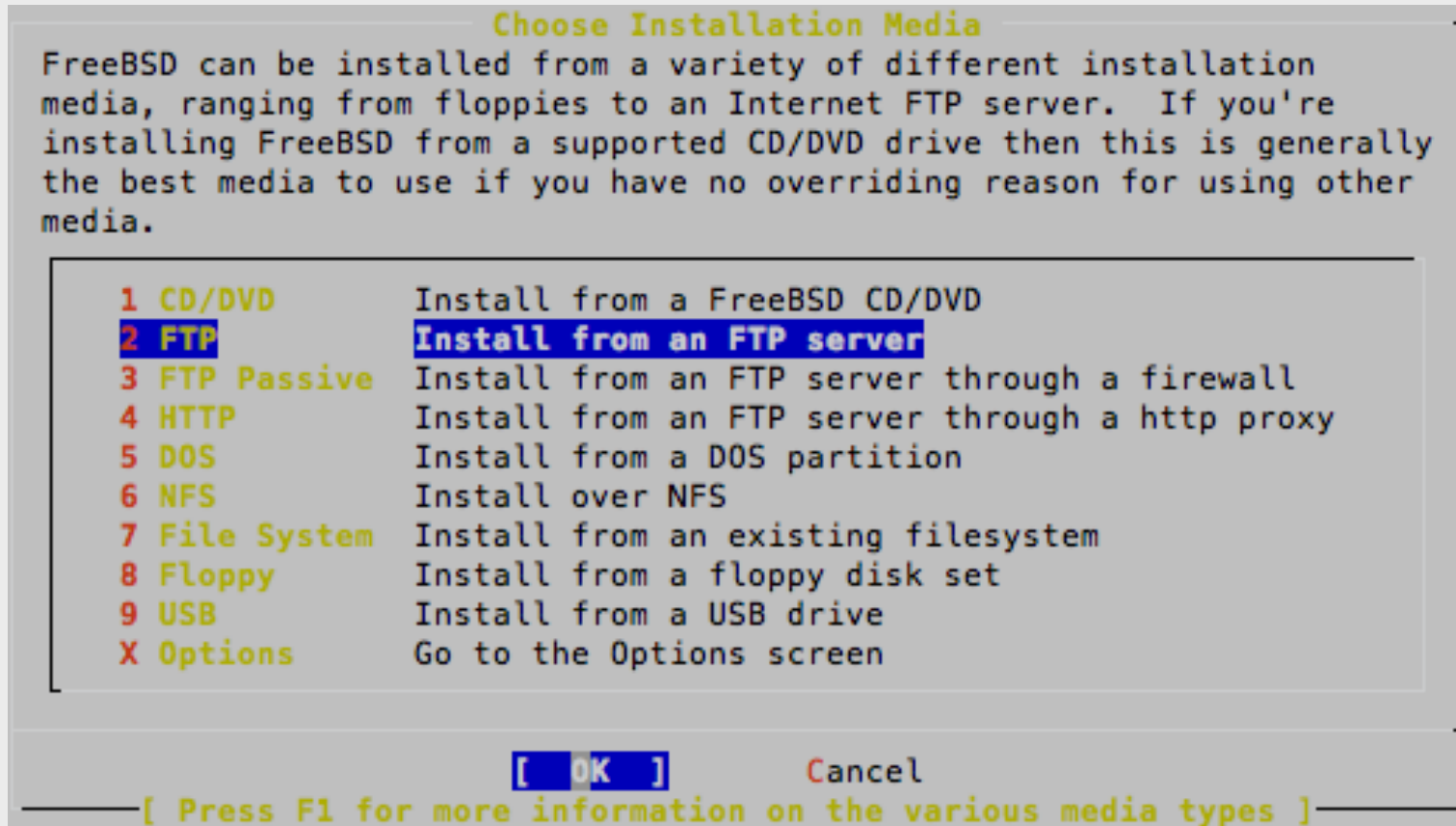
Select “Configure”, tab to “Select” and press **enter**.

Installing Gnome: Packages



Next select "Packages", tab to "OK" and press **enter**.

Additional packages: Install Media



Select “FTP”, tab to “OK” and press **enter**.

Additional packages: location

```

Please select a FreeBSD FTP distribution site
Please select the site closest to you or "other" if you'd like to
specify a different choice. Also note that not every site listed here
carries more than the base distribution kits. Only Primary sites are
guaranteed to carry the full range of possible distributions.

Main Site          ftp.freebsd.org
URL                Specify some other ftp site by URL
Snapshots Server Japan  snapshots.jp.freebsd.org
Snapshots Server Sweden snapshots.se.freebsd.org
IPv6 Main Site      ftp.freebsd.org
  IPv6 Ireland      ftp3.ie.freebsd.org
  IPv6 Israel        ftp.il.freebsd.org
  IPv6 Japan         ftp2.jp.freebsd.org
  IPv6 USA           ftp4.us.freebsd.org
  IPv6 Turkey        ftp2.tr.freebsd.org
Primary            ftp1.freebsd.org
  Primary #2         ftp2.freebsd.org
v(+)

[ OK ]          Cancel
[ Select a site that's close! ]
```

Select "Main Site", tab to "OK" and press **enter**.

Additional packages cont.

```
User Confirmation Requested
Running multi-user, assume that the network is already configured?
[ Yes ]      No
```

Select “Yes” and press **enter**.

You’ll see this for some period of time...

```
Located INDEX, now reading package data from it...
```

Installing Gnome: Package Selection

```
Package Selection
To mark a package, move to it and press SPACE.  If the package is
already marked, it will be unmarked or deleted (if installed).
Items marked with a 'D' are dependencies which will be auto-loaded.
To search for a package by name, press ESC.  To select a category,
press RETURN.  NOTE:  The All category selection creates a very large
submenu!  If you select it, please be patient while it comes up.
↑(-)
gnome      Components of the Gnome Desktop environment.
graphics  Graphics libraries and utilities.
ipv6      IPV6 related software.
irc       Internet Relay Chat utilities.
japanese  Ported software for the Japanese market.
kde       Software for the K Desktop Environment.
kld       Kernel loadable modules
korean    Ported software for the Korean market.
lang      Computer languages.
linux     Linux programs that can run under binary compatibility.
mail      Electronic mail packages and utilities.
math      Mathematical computation software.
↓(+)
```

[OK] Install

Move down the list of packages, Select “gnome”, tab to “OK” and press **enter**.

Installing Gnome: Package Selection

```
gnome
Components of the Gnome Desktop environment.
^(-)
[ ] gnome-terminal-2.26.3.1_2      [/us
[ ] gnome-themes-2.26.3.1_1       [/us
[ ] gnome-themes-extras-2.22.0_4  [/us
[ ] gnome-user-docs-2.26.2         [/us
[ ] gnome-user-share-2.26.0_1     [/us
[ ] gnome-utils-2.26.0_2,1        [/us
[ ] gnome-vfs-1.0.5_13            [/us
[ ] gnome-vfs-2.24.1_1            [/us
[ ] gnome-vfs-reference-2.24.1_1  [/us
[ ] gnome-vfsmm-2.26.0_1          [/us
[ ] gnome-vnc-0.1_7               [/us
[X] gnome2-2.26.3                 [ /us
v(+)
```

[OK] Cancel

There are a *lot* of gnome packages. We are looking for the *meta package*, or “**gnome2-2.26.3**”. Move your cursor to this line and then press the **space bar** to select this. You will have to scroll down for a *long time* before you encounter this *meta package*.

Installing Gnome: Package Selected

```
gnome
Components of the Gnome Desktop environment.
^(-)
[D] gnome-themes-2.26.3.1_1           [/us
[ ] gnome-themes-extras-2.22.0_4    [/us
[D] gnome-user-docs-2.26.2           [/us
[D] gnome-user-share-2.26.0_1        [/us
[D] gnome-utils-2.26.0_2,1          [/us
[ ] gnome-vfs-1.0.5_13               [/us
[D] gnome-vfs-2.24.1_1               [/us
[ ] gnome-vfs-reference-2.24.1_1     [/us
[ ] gnome-vfsmm-2.26.0_1             [/us
[ ] gnome-vnc-0.1_7                  [/us
[X] gnome2-2.26.3                     [/us
[ ] gnome2-fifth-toe-2.26.3_1        [/us
v(+)
```

[OK] Cancel

Notice what happens. All **D**ependent packages for `gnome2-2.26.3` are automatically chosen. Now use `tab` to select “OK” and press **enter**.

Installing additional packages

```
Package Selection
To mark a package, move to it and press SPACE.  If the package is
already marked, it will be unmarked or deleted (if installed).
Items marked with a `D' are dependencies which will be auto-loaded.
To search for a package by name, press ESC.  To select a category,
press RETURN.  NOTE: The All category selection creates a very large
submenu!  If you select it, please be patient while it comes up.
^(-)
security      System security software.
shells        Various shells (tcsh, bash, etc).
spanish       Ported software for the Spanish market.
sysutils      Various system utilities.
tcl           TCL and packages that depend on it.
textproc      Text processing/search utilities.
tk            Tk and packages that depend on it.
ukrainian     Ported software for the Ukrainian market.
vietnamese    Ported software for the Vietnamese market.
windowmaker   Ports to support the WindowMaker window manager.
www           Web utilities (browsers, HTTP servers, etc).
x11           X Window System based utilities.
v(+)
```

[OK] Install

You are returned to the Package Selection screen. **Don't** choose Install yet. Now scroll down to the “**www**” category...

Install additional packages

```
Package Selection
To mark a package, move to it and press SPACE.  If the package is
already marked, it will be unmarked or deleted (if installed).
Items marked with a `D' are dependencies which will be auto-loaded.
To search for a package by name, press ESC.  To select a category,
press RETURN.  NOTE: The All category selection creates a very large
submenu!  If you select it, please be patient while it comes up.
^(-)
security      System security software.
shells        Various shells (tcsh, bash, etc).
spanish       Ported software for the Spanish market.
sysutils      Various system utilities.
tcl           TCL and packages that depend on it.
textproc     Text processing/search utilities.
tk           Tk and packages that depend on it.
ukrainian    Ported software for the Ukrainian market.
vietnamese   Ported software for the Vietnamese market.
windowmaker  Ports to support the WindowMaker window manager.
www          Web utilities (browsers, HTTP servers, etc).
x11          X Window System based utilities.
v(+)
```

[OK] Install

Highlight “**www**”, tab to **OK** and press **enter**.

Install Firefox 3.5

```
www
Web utilities (browsers, HTTP servers, etc).


[ ] fget-1.3.3           [/usr/ports/ftp/fget]
[ ] fhttpd-0.4.2       [/usr/ports/www/fhttpd]
[ ] firefox-3.0.15,1   [/usr/ports/www/firefox3]
[X] firefox-3.5.4,1    [/usr/ports/www/firefox35]
[ ] firefox-i18n-2.0.0.20 [/usr/ports/www/firefox-i18n]
[ ] firefox-remote-20040803_3 [/usr/ports/www/firefox-remote]
[ ] firefox3-i18n-3.0.13 [/usr/ports/www/firefox3-i18n]
[ ] firefox35-i18n-3.5.3 [/usr/ports/www/firefox35-i18n]
[ ] flashplugin-mozilla-0.4.13_4 [/usr/ports/www/flashplugin-mozilla]
[ ] flat-frog-2.2.13   [/usr/ports/www/flat-frog]
[ ] flickcurl-1.14    [/usr/ports/www/flickcurl]
[ ] flock              [/usr/ports/www/flock]

v(+)
[ OK ](+)  Cancel
```

Scroll down the list of packages until you find “**firefox-3.5.4,1**”, press the space bar to select the package then tab to **OK** and press **enter**.

Additional packages cont.


```
Package Selection
To mark a package, move to it and press SPACE. If the package is
already marked, it will be unmarked or deleted (if installed).
Items marked with a 'D' are dependencies which will be auto-loaded.
To search for a package by name, press ESC. To select a category,
press RETURN. NOTE: The All category selection creates a very large
submenu! If you select it, please be patient while it comes up.
^(-)
textproc      Text processing/search utilities.
tk            Tk and packages that depend on it.
ukrainian     Ported software for the Ukrainian market.
vietnamese    Ported software for the Vietnamese market.
windowmaker   Ports to support the WindowMaker window manager.
www           Web utilities (browsers, HTTP servers, etc).
x11           X Window System based utilities.
x11-clocks    X Window System based clocks.
x11-drivers   X Window System drivers.
x11-fm        X Window System based file managers.
x11-fonts     X Window System fonts and font utilities.
x11-servers   X Window System servers.
v(+)
```

 Install

You will be returned to the category list with **www** highlighted. Again, **don't** press install, instead start scrolling down the list until...

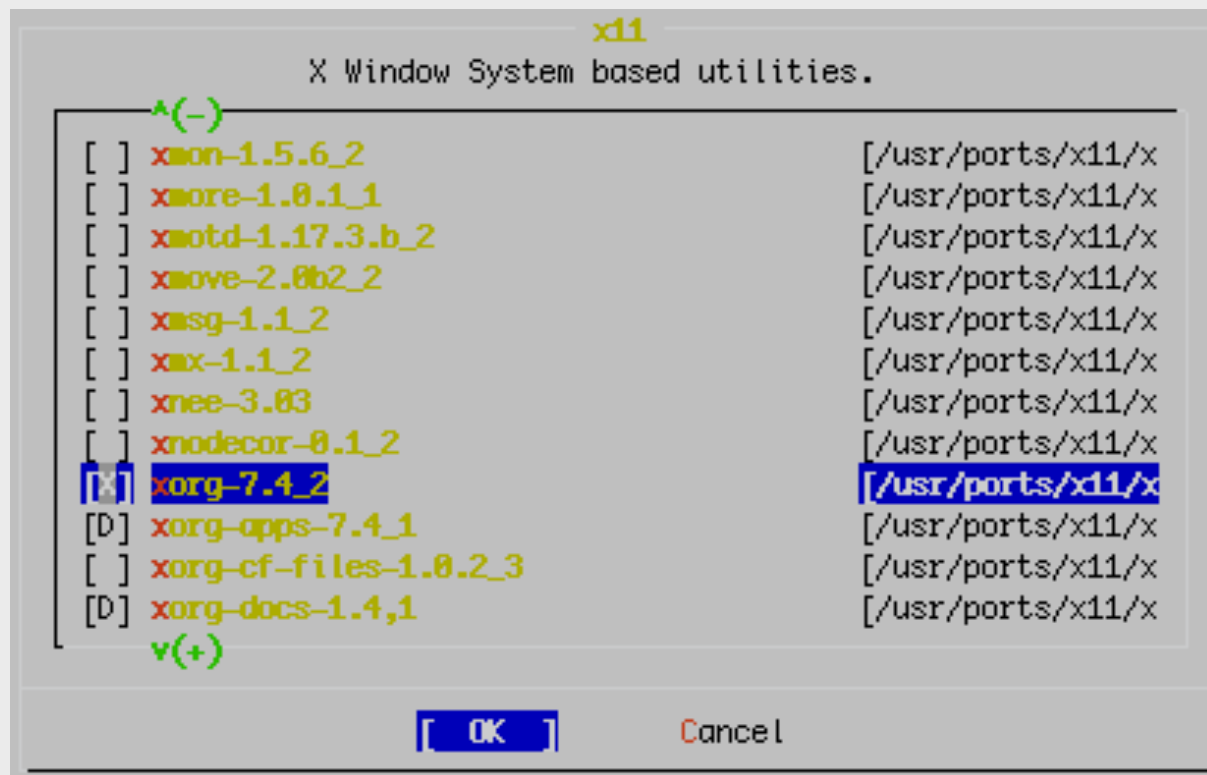
Additional packages cont.

```
Package Selection
To mark a package, move to it and press SPACE. If the package is
already marked, it will be unmarked or deleted (if installed).
Items marked with a 'D' are dependencies which will be auto-loaded.
To search for a package by name, press ESC. To select a category,
press RETURN. NOTE: The All category selection creates a very large
submenu! If you select it, please be patient while it comes up.
^(-)
textproc      Text processing/search utilities.
tk            Tk and packages that depend on it.
ukrainian     Ported software for the Ukrainian market.
vietnamese    Ported software for the Vietnamese market.
windowmaker   Ports to support the WindowMaker window manager.
www          Web utilities (browsers, HTTP servers, etc).
x11          X Window System based utilities.
x11-clocks    X Window System based clocks.
x11-drivers   X Window System drivers.
x11-fm        X Window System based file managers.
x11-fonts     X Window System fonts and font utilities.
x11-servers   X Window System servers.
v(+)
```

 Install

...you highlight **x11**. Use **tab** to highlight **OK** and press **enter**.

Additional packages: xorg



Scroll down the list to the *meta-package* “**xorg-7.4_2**” – Press the space bar to select the package, then tab to **OK** and press **enter**.

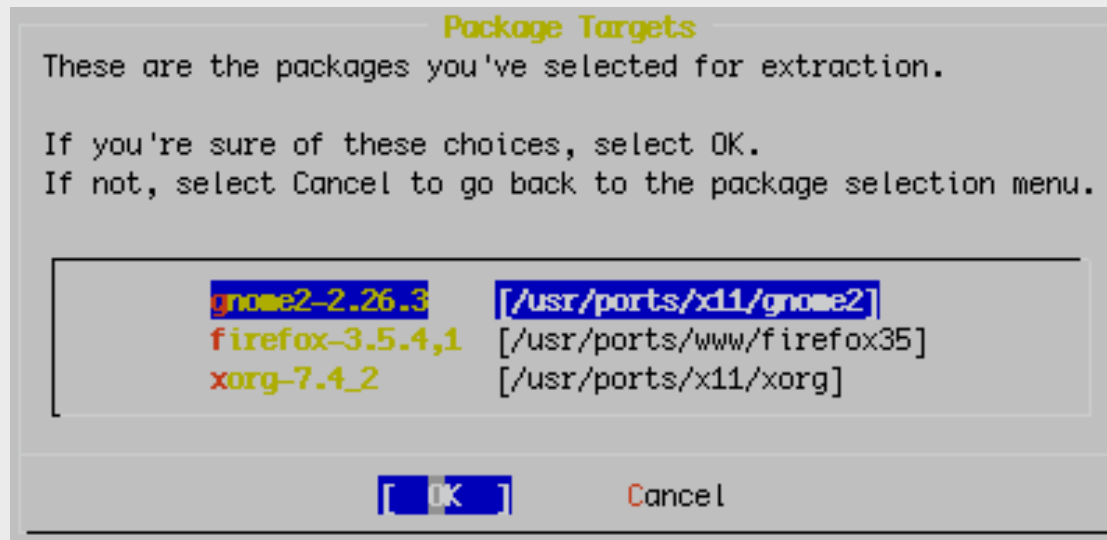
Additional packages

```
Package Selection
To mark a package, move to it and press SPACE. If the package is
already marked, it will be unmarked or deleted (if installed).
Items marked with a 'D' are dependencies which will be auto-loaded.
To search for a package by name, press ESC. To select a category,
press RETURN. NOTE: The All category selection creates a very large
submenu! If you select it, please be patient while it comes up.
^(-)
security      System security software.
shells        Various shells (tcsh, bash, etc).
sysutils      Various system utilities.
textproc      Text processing/search utilities.
windowmaker   Ports to support the WindowMaker window manager.
ww            Web utilities (browsers, HTTP servers, etc).
x11           X Window System based utilities.
x11-clocks    X Window System based clocks.
x11-drivers   X Window System drivers.
x11-fm        X Window System based file managers.
x11-fonts     X Window System fonts and font utilities.
x11-servers   X Window System servers.
v(+)
```

OK

You will be returned to the category list with **x11** highlighted. Now, **do select install** and press **enter**.

Additional packages: verify choices



Be sure "OK" is chosen and then press **enter** to install Gnome, xorg and Firefox.

Additional packages: verify site

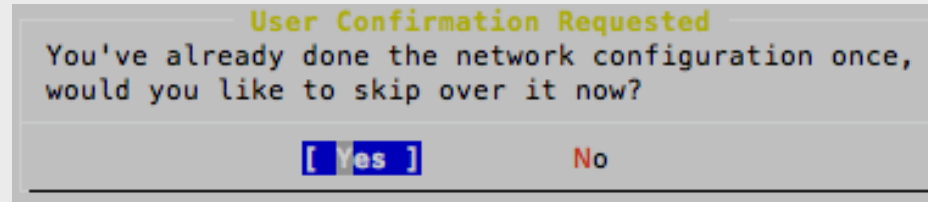
```
Please select a FreeBSD FTP distribution site
Please select the site closest to you or "other" if you'd like to
specify a different choice. Also note that not every site listed here
carries more than the base distribution kits. Only Primary sites are
guaranteed to carry the full range of possible distributions.

Main Site      ftp.freebsd.org
URL            Specify some other ftp site by URL
Snapshots Server Japan  snapshots.jp.freebsd.org
Snapshots Server Sweden snapshots.se.freebsd.org
IPv6 Main Site  ftp.freebsd.org
  IPv6 Ireland  ftp3.ie.freebsd.org
  IPv6 Israel   ftp.il.freebsd.org
  IPv6 Japan    ftp2.jp.freebsd.org
  IPv6 USA      ftp4.us.freebsd.org
  IPv6 Turkey   ftp2.tr.freebsd.org
Primary        ftp1.freebsd.org
Primary #2     ftp2.freebsd.org
v(+)

[ OK ]      Cancel
[ Select a site that's close! ]
```

You may see this dialogue again. If you do, tab to **OK** and press enter. Be sure that “**Main Site**” is chosen.

Additional packages: verify network



If you see this dialogue choose **Yes** and press **enter** to continue.

Additional packages: installing

```
Adding packages/All/pcre-7.9.tbz (as a dependency)
from ftp://ftp.freebsd.org
```

You will see a *lot* of packages being installed. Installation will take a few minutes. Once installation has completed you will see the original sysinstall screens again...

Note: installation of these packages may take close to an hour. If this is the case we may do something else in class while they are installing.

Installing Gnome: Config Menu

```
FreeBSD Configuration Menu
If you've already installed FreeBSD, you may use this menu to customize
it somewhat to suit your particular configuration.  Most importantly,
you can use the Packages utility to load extra "3rd party"
software not provided in the base distributions.

X Exit          Exit this menu (returning to previous)
Distributions   Install additional distribution sets
Packages        Install pre-packaged software for FreeBSD
Root Password   Set the system manager's password
Fdisk           The disk Slice (PC-style partition) Editor
Label           The disk Label editor
User Management Add user and group information
Console         Customize system console behavior
Time Zone       Set which time zone you're in
Media           Change the installation media type
Mouse           Configure your mouse
Networking      Configure additional network services
↓(+)

[ OK ]          Cancel
[ Press F1 for more information on these options ]
```

You are returned to the sysinstall Configuration Menu.
Be sure **"X Exit"** is chosen, tab to **"OK"** and press **enter**.

Installing Gnome: Exit Menu

```
FreeBSD/i386 7.2-RELEASE - sysinstall Main Menu
Welcome to the FreeBSD installation and configuration tool. Please
select one of the options below by using the arrow keys or typing the
first character of the option name you're interested in. Invoke an
option with [SPACE] or [ENTER]. To exit, use [TAB] to move to Exit.

Usage      Quick start - How to use this menu system
Standard   Begin a standard installation (recommended)
Express     Begin a quick installation (for experts)
Custom     Begin a custom installation (for experts)
Configure  Do post-install configuration of FreeBSD
Doc        Installation instructions, README, etc.
Keymap     Select keyboard type
Options    View/Set various installation options
Fixit      Repair mode with CDROM/DVD/floppy or start shell
Upgrade    Upgrade an existing system
Load Config Load default install configuration
Index      Glossary of functions

Select    [X Exit Install]
```

We are returned to the sysinstall Main Menu. Use tab to select “**X Exit Install**” and press **enter**. You are almost done.

Installing Gnome: Cleanup Cont.

You should now have the “#” prompt, once again, on your screen.

Now we must edit the file */etc/rc.conf* and add one other line. This will cause Gnome to start whenever we boot our machine.

```
# vi /etc/rc.conf
```

Now go to the bottom of the file and press the “o” key to add a blank line. Add the following entry:

```
gnome_enable="YES"
```

Now press Esc, then type “:wq” (don’t forget the “:”) to exit and save the file. You should be back at the “#” prompt.

Installing Gnome: Finish

Now we will create a user other than *root* that we will use when logging in with Gnome. We will call this user *afnog* and this will be our administrative user that we use throughout the workshop.

```
# pw useradd afnog -m -s /usr/local/bin/bash -G wheel
```

This user has a home directory, uses *bash* as its default shell and belongs to the *wheel* group. Be sure to set a password for this user:

```
# passwd afnog      (Use the password given in class)
```

While not necessary, we will now reboot our machine so that you can see the new default behaviour. At the prompt type:

```
# shutdown -r now
```

Upon rebooting you should be presented with the Gnome graphical login prompt. Don't log in as the *root* user, rather use the *afnog* user to log in at this point. Enjoy!