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

Thank you :-)

Boot Off DVD

- Insert the FreeBSD 8.2 DVD into your 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.**

NB: 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.

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Installation: How to use the Keyboard

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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 "Malawi"

```
┌──────────────── Country Selection ─────────────────┐
│ Please choose a country, region, or group.          │
│ Select an item using [SPACE] or [ENTER].            │
│ ┌─↑(-)──────────────────────────────────────────┐ │
│ │  126    Liechtenstein                          │ │
│ │  127    Lithuania                              │ │
│ │  128    Luxembourg                             │ │
│ │  129    Macao                                  │ │
│ │  130    Macedonia, the Former Yugoslav Republic of │ │
│ │  131    Madagascar                             │ │
│ │  132    Malawi                                 │ │
│ │  133    Malaysia                               │ │
│ │  134    Maldives                              │ │
│ │  135    Mali                                   │ │
│ │  136    Malta                                  │ │
│ │  137    Marshall Islands                       │ │
│ │  138    Martinique                             │ │
│ │  139    Mauritania                             │ │
│ └─↓(+)──────────────────────────────────────────┘ │
│                                                     │
│         [  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.     │
│ ┌─↑(-)────────────────────────────────────────────────────────┐│
│ │ 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                      ││
│ │ USA UNIX                 US traditional UNIX-workstation    ││
│ └──────────────────────────────────────────────────────────────┘│
│                                                                │
│              [  OK  ]          Cancel                          │
└──────────────── [ Choose a keyboard map ] ────────────────────┘
```

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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
```

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 ]
```

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Confirm Geometry of Disk

```
┌─ User Confirmation Requested ─────────────────────────┐
│ WARNING:  It is safe to use a geometry of 88768/15/63 for ad0 on
│ computers with modern BIOS versions.  If this disk is to be used
│ on rather old machines, however, it is recommended to ensure that
│ it does not have more than 65535 cylinders, or more than 255 heads
│ or more than 63 sectors per track.
│
│ Would you like that to keep using the current geometry?
│
│              [ Yes ]              No
└───────────────────────────────────────────────────────┘
```

If you see this warning…

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

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How Much of the Disk to Use

```
Disk name:        ad0                            FDISK Partition Editor
DISK Geometry:  20805 cyls/16 heads/63 sectors = 20971440 sectors (10239MB)

Offset         Size(ST)          End      Name  PType      Desc  Subtype      Flags

       0      20971520      20971519        -       12     unused          0




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

A = Use Entire Disk   G = set Drive Geometry   C = Create Slice
D = Delete Slice      Z = Toggle Size Units    S = Set Bootable    ! = Expert m.
T = Change Type       U = Undo All Changes     Q = Finish


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

Press "**D**" to delete existing slices.
We will use our Entire Disk. Press "**A**" to do this.

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Using the Entire Disk for FreeBSD

```
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              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 "**A**". Now press "**Q**" to leave this screen and continue with installation.

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

```
                           ─ Message ─
 Now you need to create BSD partitions inside of the fdisk partition(s)
 just created.  If you have a reasonable amount of disk space (1GB or more)
 and don't have any special requirements, simply use the (A)uto command to
 allocate space automatically.  If you have more specific needs or just don't
 care for the layout chosen by (A)uto, press F1 for more information on
 manual layout.
                                                                  (100%)─
                           [  OK   ]
                    ─[ Press enter or space ]─
```

Now "Slice Up" your Disk (Partition)

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        /             473MB UFS2     Y
ad0s1b        swap          851MB SWAP
ad0s1d        /var          889MB UFS2+S   Y
ad0s1e        /tmp          454MB UFS2+S   Y
ad0s1f        /usr         7572MB 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

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**

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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   │ │
│ │ [ ] 4 Developer      Full sources, binaries and doc but no games   │ │
│ │ [X] 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

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

Confirm Installation

```
┌───────────── User Confirmation Requested ─────────────┐
│ Last Chance!  Are you SURE you want continue the installation? │
│                                                                │
│ If you're running this on a disk with data you wish to save    │
│ then WE STRONGLY ENCOURAGE YOU TO MAKE PROPER BACKUPS before   │
│ proceeding!                                                    │
│                                                                │
│ We can take no responsibility for lost disk contents!          │
│                                                                │
│              [ Yes ]              No                           │
└────────────────────────────────────────────────────────┘
```

Select "Yes"

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What you'll see on the screen…

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 ]
```
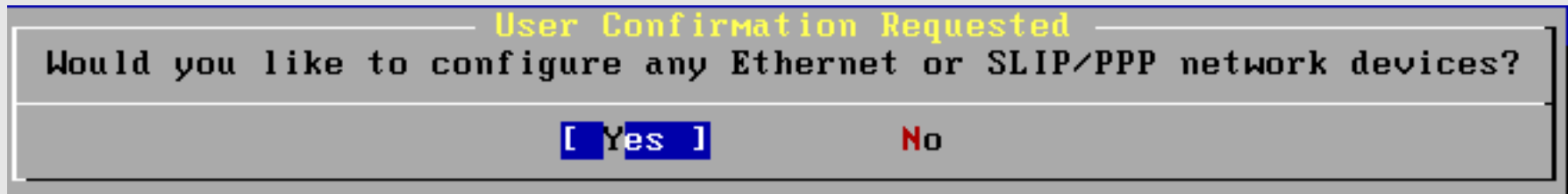
Press ENTER to continue with configuration.

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"
│ cabl┌──────────── User Confirmation Requested ────────────┐qq─
│     │ Do you want to try IPv6 configuration of the interface? │
│     │                                                         │
│     │          Yes              [   No   ]                    │
│     └─────────────────────────────────────────────────────────┘
│     │ ppp0    PPP interface on device /dev/cuad0 (COM1)
│       sl0     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"
 cabl                  User Confirmation Requested
      Do you want to try DHCP configuration of the interface?    qq

                 Yes          [  No  ]

    ppp0    PPP interface on device /dev/cuad0 (COM1)
    sl0     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:

   pc100.afchix.mw                    afchix.mw

   IPv4 Gateway:                      Name server:

   10.10.10.254                       10.10.10.200

            Configuration for Interface em0
         IPv4 Address:            Netmask:

         10.10.10.100             255.255.255.0█

         Extra options to ifconfig (usually empty):



              OK                      CANCEL
```

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-pc30).

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  ]
```

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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  ]                          │
│                                                                       │
└───────────────────────────────────────────────────────────────────┘
```
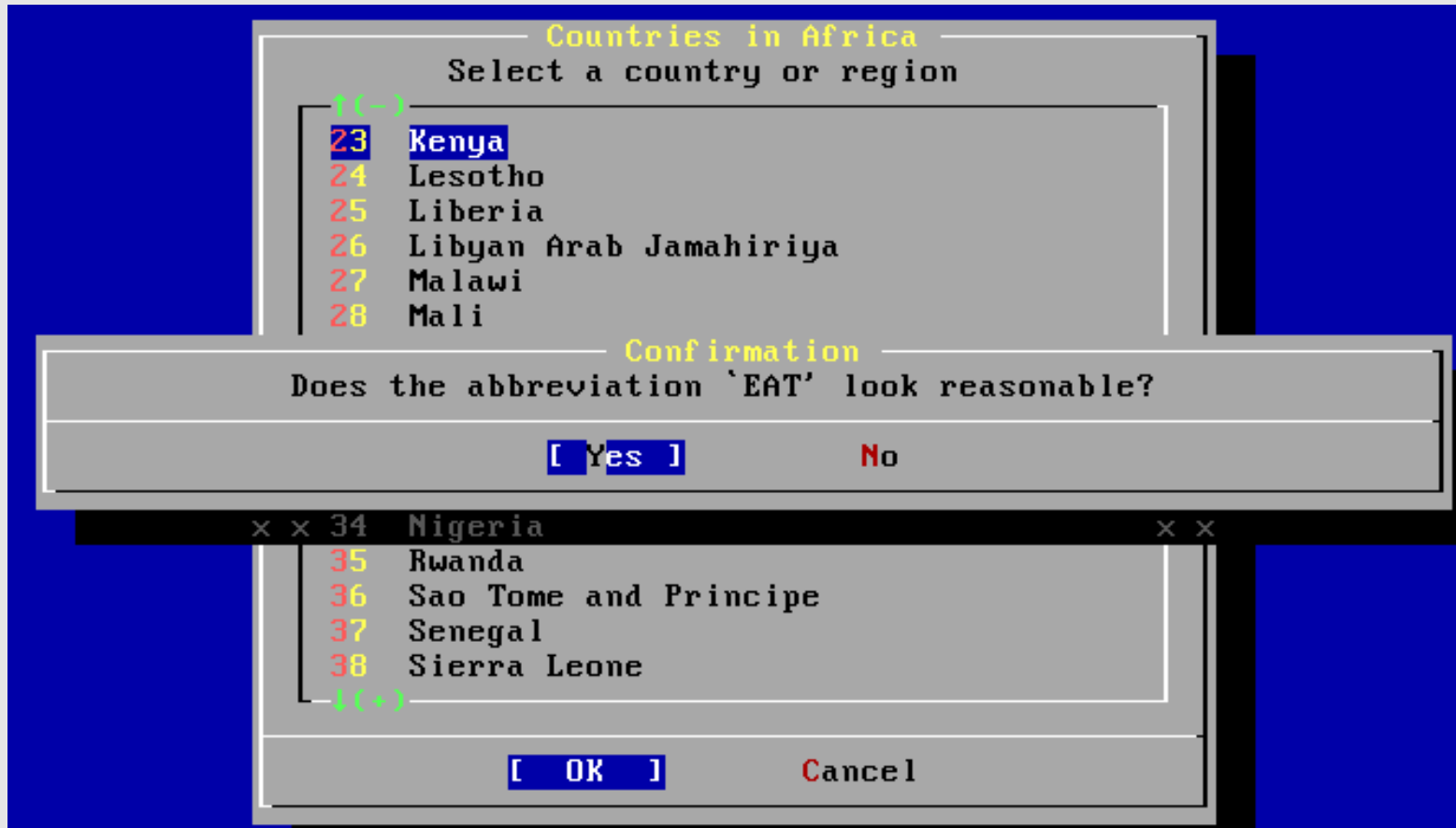
```
┌──────── Time Zone Selector ────────┐
│           Select a region          │
│  ┌──────────────────────────────┐  │
│  │ 1  Africa                    │  │
│  │ 2  America -- North and South│  │
│  │ 3  Antarctica                │  │
│  │ 4  Arctic Ocean              │  │
│  │ 5  Asia                      │  │
│  │ 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**.

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Configuring Time Zone

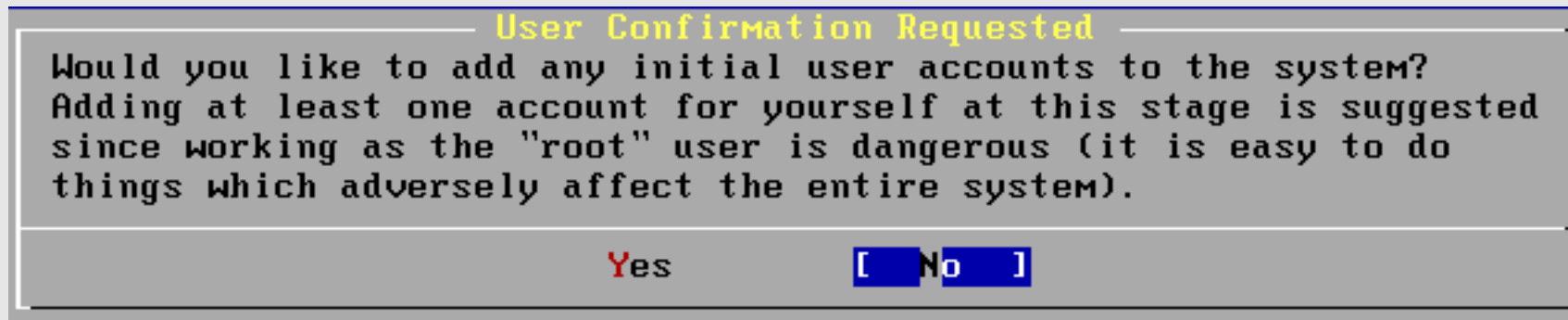Scroll to "Kenya", tab to "OK" and press **enter** and "Yes" for EAT.

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:
```
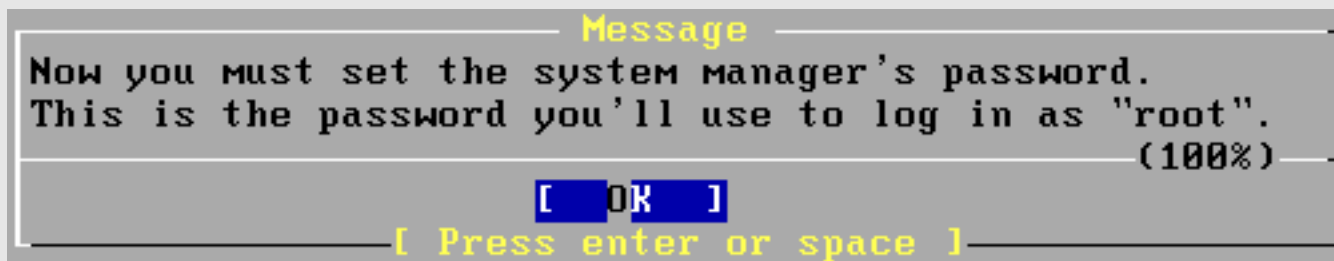
Your class instructor will give you the password: "afnogchix"

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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   ]                     │
 │                                                             │
 └─────────────────────────────────────────────────────────────┘
```
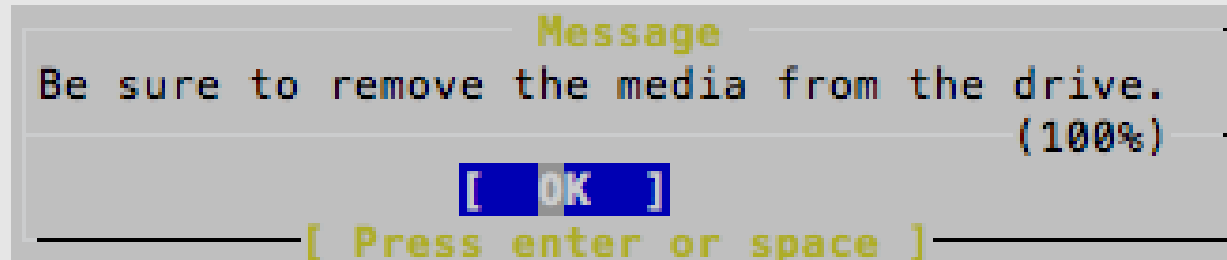
Select "No" and press **enter** to continue.

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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

```
────────────────────────── Message ──────────────────────────
Be sure to remove the media from the drive.
                                                      (100%)

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

Select "Yes" and press **enter**. Be sure to remove your FreeBSD 8.2 CD-ROM/DVD 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.

Congratulations!
You have successfully installed FreeBSD
8.2.

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

==>

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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)
    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
```

Select "Configure", tab to "Select" and press **enter**.

Installing Gnome: Packages

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

Additional packages: Install Media

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 USB           Install from a USB drive
X Options       Go to the Options screen
```

[OK   ]   Cancel

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

Select "FreeBSD CD/DVD", tab to "OK" and press **enter**.
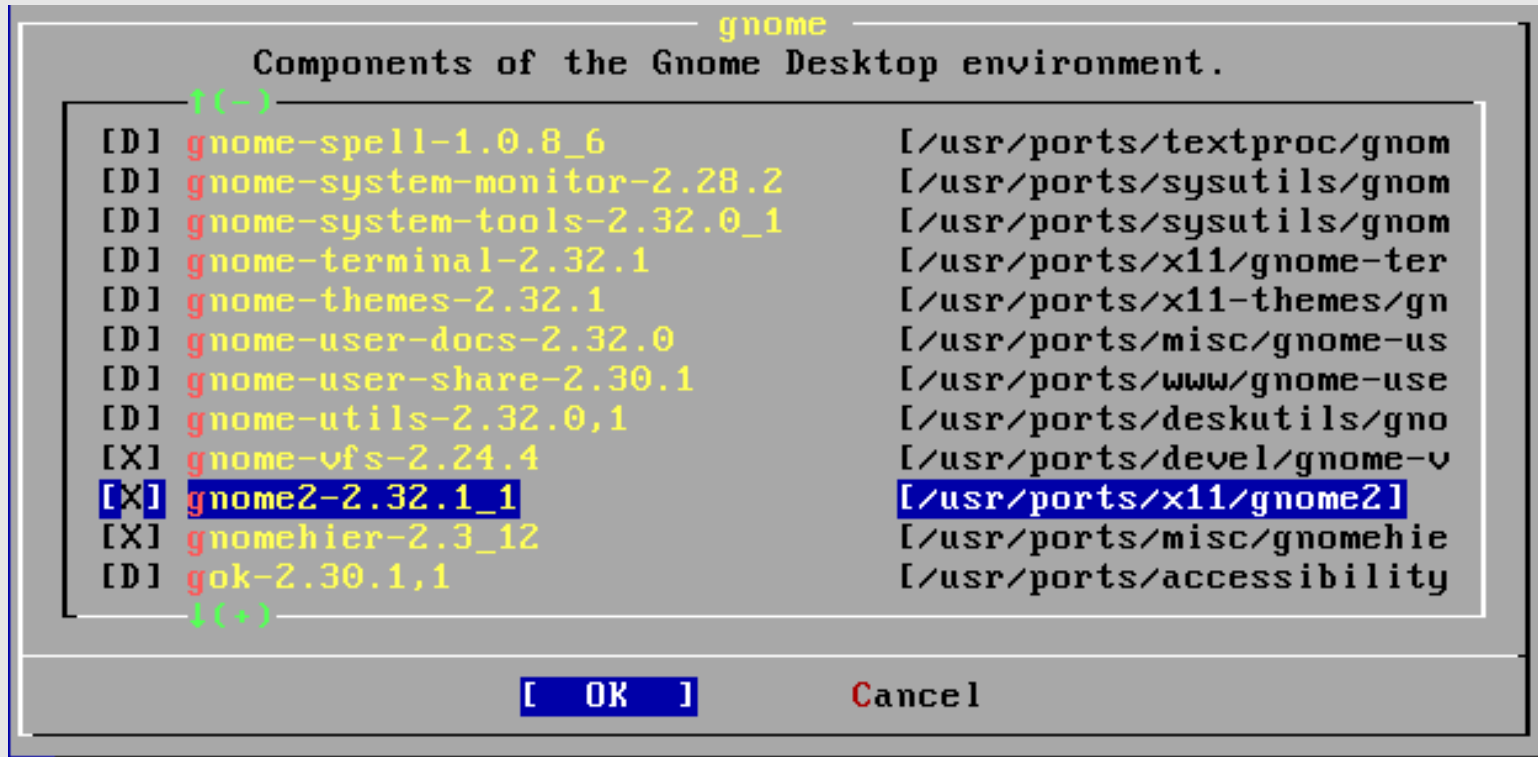
Installing Gnome: Package Selection

```
                    ── 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
```
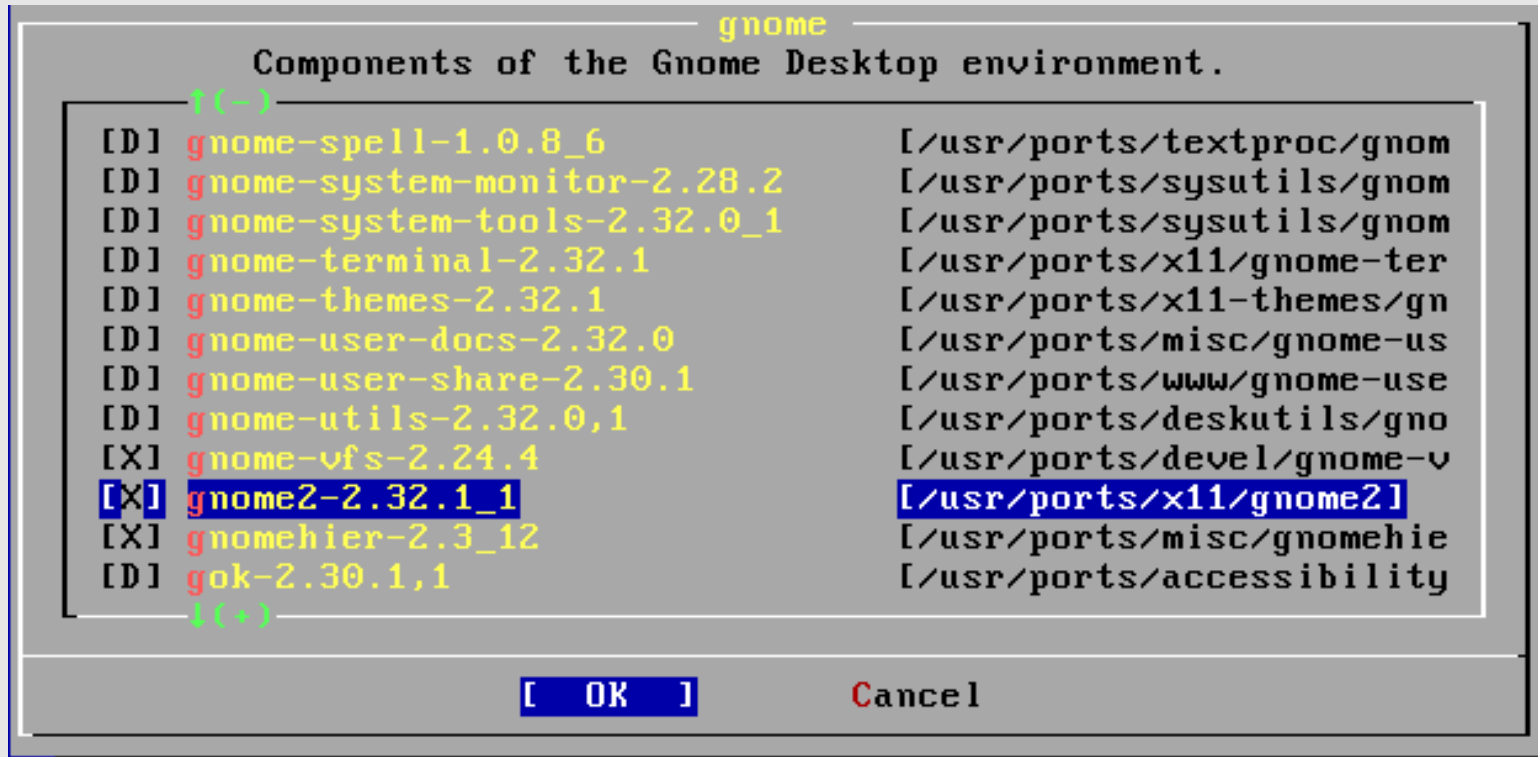
Move down the list of packages, Select "gnome", tab to "OK" and
press **enter**.

Installing Gnome: Package Selection


```
                           gnome
         Components of the Gnome Desktop environment.
      ↑(-)
  [D] gnome-spell-1.0.8_6              [/usr/ports/textproc/gnom
  [D] gnome-system-monitor-2.28.2     [/usr/ports/sysutils/gnom
  [D] gnome-system-tools-2.32.0_1     [/usr/ports/sysutils/gnom
  [D] gnome-terminal-2.32.1           [/usr/ports/x11/gnome-ter
  [D] gnome-themes-2.32.1             [/usr/ports/x11-themes/gn
  [D] gnome-user-docs-2.32.0          [/usr/ports/misc/gnome-us
  [D] gnome-user-share-2.30.1         [/usr/ports/www/gnome-use
  [D] gnome-utils-2.32.0,1            [/usr/ports/deskutils/gno
  [X] gnome-vfs-2.24.4                [/usr/ports/devel/gnome-v
  [X] gnome2-2.32.1_1                 [/usr/ports/x11/gnome2]
  [X] gnomehier-2.3_12                [/usr/ports/misc/gnomehie
  [D] gok-2.30.1,1                    [/usr/ports/accessibility
      ↓(+)

              [   OK   ]        Cancel
```

There are a *lot* of gnome packages. We are looking for the *meta package*, or "**gnome2-2.32.1_1**". 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.*

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Installing Gnome: Package Selected

```
                              gnome
        Components of the Gnome Desktop environment.
    ↑(-)
    [D] gnome-spell-1.0.8_6              [/usr/ports/textproc/gnom
    [D] gnome-system-monitor-2.28.2      [/usr/ports/sysutils/gnom
    [D] gnome-system-tools-2.32.0_1      [/usr/ports/sysutils/gnom
    [D] gnome-terminal-2.32.1            [/usr/ports/x11/gnome-ter
    [D] gnome-themes-2.32.1              [/usr/ports/x11-themes/gn
    [D] gnome-user-docs-2.32.0           [/usr/ports/misc/gnome-us
    [D] gnome-user-share-2.30.1          [/usr/ports/www/gnome-use
    [D] gnome-utils-2.32.0,1             [/usr/ports/deskutils/gno
    [X] gnome-vfs-2.24.4                 [/usr/ports/devel/gnome-v
    [X] gnome2-2.32.1_1                  [/usr/ports/x11/gnome2]
    [X] gnomehier-2.3_12                 [/usr/ports/misc/gnomehie
    [D] gok-2.30.1,1                     [/usr/ports/accessibility
    ↓(+)

              [  OK  ]          Cancel
```

Notice what happens. All **D**ependent packages for **gnome2-2.32.1_1** 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

Highlight "**www**", tab to **OK** and press **enter.**

Install Firefox 3.5

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

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

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

Scroll down the list of packages until you find "**firefox-3.6.1.3**", 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(+)
              [ OK ]    Install
```

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

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Additional packages cont.

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

Additional packages: xorg

Scroll down the list to the *meta-package* "**xorg-7.5**" – 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.
  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(+)

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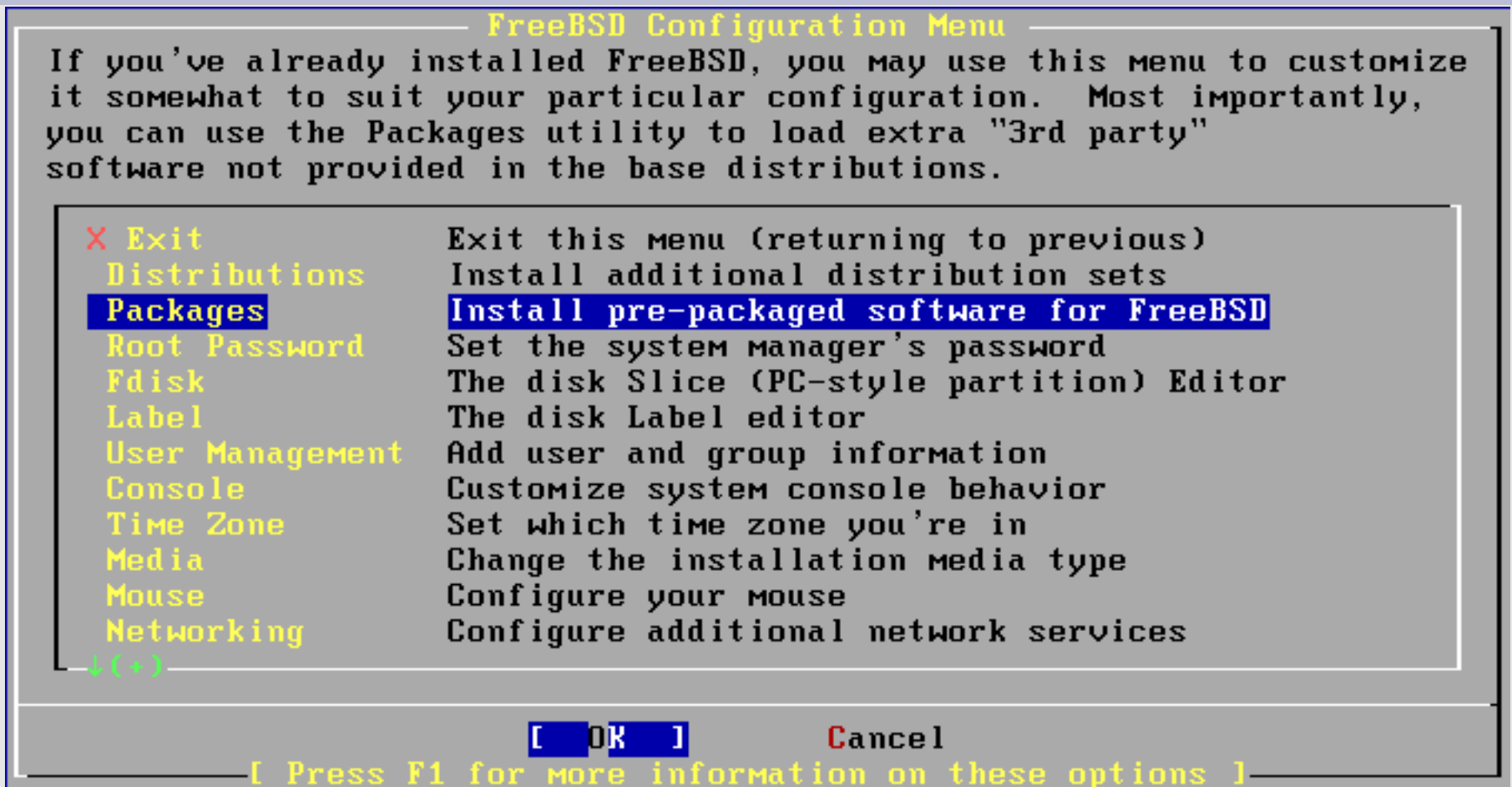
You will be returned to the category list with **x11** highlighted.
Now, **do select install** and press **enter**.

Additional packages: verify choices
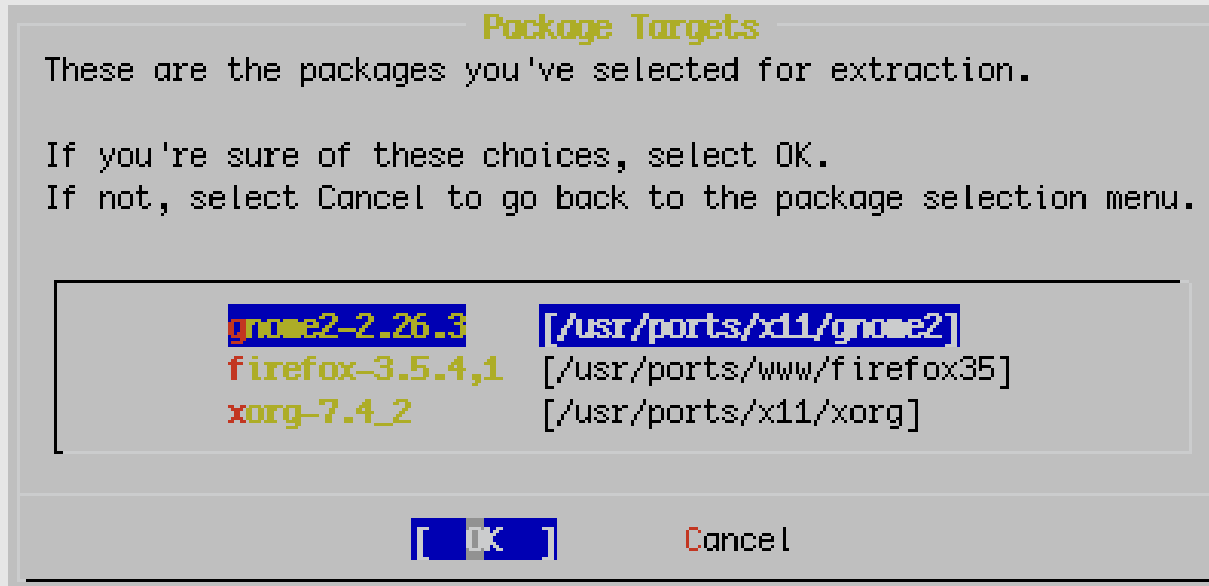
Be sure "OK" is chosen and then press **enter** to install Gnome, xorg and Firefox.

Additional packages: verify site


```
┌──────────────────── 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 may see this dialogue again. If you do, press **X** to **Exit** and again
to **Exit Install**.

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**.

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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.

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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 afnogchix -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 afnogchix
```
(Use the password given in class - "*chix2011*")

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
```

Installing Gnome: Finish

Upon rebooting you should be presented with the Gnome graphical login prompt.

Don't log in as the *root* user, rather use the *afnogchix* user to log in at this point.

Enjoy!

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