INSTALLING BOCHS AND MINIX ON WINDOWS XP

Prepared For:ECS150 (Operating Systems)
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PREPARATION

Required Files:

File Name	Download Location
Bochs-2.0.2.exe	http://prdownloads.sourceforge.net/bochs/Bochs-2.0.2.exe
minix.tar.gz	http://wwwcsif.cs.ucdavis.edu/downloads/minix.tar.gz
floppy.tar.gz	http://wwwcsif.cs.ucdavis.edu/downloads/floppy.tar.gz

Required Programs:

You will need a program that can handle .tar.gz files. The latest versions of **WinZip** should support .tar.gz files. An evaluation version can be downloaded from:

http://www.winzip.com/ddca.htm

Another program that would work is **WinRAR**. An evaluation version is available at:

http://www.rarsoft.com/download.htm

INSTALLING BOCHS

Make sure you have downloaded the file Bochs-2.0.2.exe. If the link above does not work, go to the official **Bochs** website at <u>http://bochs.sourceforge.net/</u> and click "See All Releases" from the side menu. You should be able to download the latest windows installer from there.

Once downloaded, run Bochs-2.0.2.exe. The installation should be straight forward. Remember the location you install **Bochs** (for later reference). The default location should be:

C:\Program Files\Bochs-2.0.2

Below is a sample **Bochs** installation prompt:

😻 Bochs 2.0.2 Setup: Instr	allation Options 🛛 🔀
Choose Components Choose the components you w	ant to install.
Check the components you wa install. Click Next to continue.	nt to install and uncheck the components you don't want to
Or, select the optional components you wish to install:	Normal Bochs Program (required) ROM Images (required) Documentation in HTML DLX Linux Demo Add Bochs to the Start Menu and Desktop Register .bxrc Extension
Space required: 3.0MB	Description Installs the core Bochs 2.0.2 applications.
Nullsoft Install System v2,0a7 —	< Back Next > Cancel

The installation program should place a **Bochs** icon on your desktop. If not, you can start **Bochs** by running bochs.exe (located in the installation folder). Below is what you should see when running **Bochs** for the first time:

🗠 C:\Program Files\Bochs-2.0.2\bochs.exe	- 🗆	×
Bochs x86 Emulator 2.0.2 January 21, 2003		
Bochs Configuration: Main Menu		
This is the Bochs Configuration Interface, where you can describe the machine that you want to simulate. Bochs has already searched for a configuration file (typically called bochsrc.txt) and loaded it if it could be found. When you are satisfied with the configuration, go ahead and start the simulation.		
You can also start bochs with the $-\mathbf{q}$ option to skip these menus.		
1. Restore factory default configuration 2. Read options from 3. Edit options 4. Save options to 5. Begin simulation 6. Quit now		
Please choose one: [2]		-

INSTALLING MINIX

Now that **Bochs** is installed, it is time to install **Minix**.

I recommend creating a directory for **Minix** somewhere on your system. For this example, assume this directory is:

C:\ECS150\Minix

Using **WinZip**, **WinRAR**, or an equivalent program, uncompress the contents of minix.tar.gz into the above directory. You should now have the following files:

```
C:\ECS150\Minix\bochsrc.txt
C:\ECS150\Minix\minix203.img
```

At this point, **Minix** is now "installed". However, some configuration must occur before you can run **Minix** under **Bochs**.

RUNNING MINIX ON BOCHS

The easiest way to run Minix on Bochs is to rename the file bochsrc.txt to bochsrc.bxrc. Then, you should be able to double-click bochsrc.bxrc to start Minix. You should then see the following screen popup:



Pressing the "=" key will boot **Minix**. The login is root, with no password. At this point, you have successfully installed and run **Minix** on **Bochs**.

If changing the extension of bochsrc.txt to bochsrc.bxrc did not work, please see me. There are a couple other ways to get **Minix** running on **Bochs** that we can try.

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You may be required to turn in homework assignments using a floppy disk, or a virtual floppy image. (More on homework hand-in procedures will be posted later.)

Virtual Floppy Disk Image:

First, let's configure Minix to support a virtual floppy disk image. You will need to use WinZip, WinRAR, or an equivalent program to uncompress the contents of floppy.tar.gz into C:\ECS150\Minix. The folder should now look something like this:



Note: The file bochsout.txt is automatically created by **Bochs** after the first time you run **Minix**.

This should be all that is required to use floppy.img as a virtual floppy image. For more information on mounting and unmounting this floppy image under **Bochs** and **Minix**, see the document minix_bochs.pdf available from the course website at:

http://www.cs.ucdavis.edu/~wu/ecs150/minix_bochs.pdf

Physical Floppy Disk:

To use a physical floppy drive, you must edit the bochsrc.bxrc file. Line 35 should read as:

```
floppya: 1_44=/dev/fd0, status=inserted
```

You will have to change this to the following:

```
floppya: 1_44=a:, status=inserted
```

You should then be able to follow all the steps in $\verb"minix_bochs.pdf"$ to mount/unmount this device.