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Chapter 4. Setup

4.1. What does Bochs need?

These are the minimum requirements for running an OS inside of Bochs:

* the Bochs executable
* the BIOS image (usually called BIOS-bochs-latest)
* the VGA BIOS image (e.g. VGABIOS-lgpl-latest or VGABIOS-elpin-2.40)
* at least one bootable media, either as disk image (floppy, hard disk or CD-ROM) or physical disk (floppy or CD-ROM)

**Note:** Both VGA BIOS versions as well as the ROM BIOS are part of the Bochs package. No separate download is necessary. See [Section 4.2](http://docs.google.com/rom-images.html) for more information.

**Note:** If you want to use the Cirrus SVGA adapter instead of VGA + Bochs VBE, you should have a look at [Section 8.19](http://docs.google.com/cirrus-notes.html).

In that case you have to pass the configuration options on the command line or to use the configuration interface to set up Bochs for the simulation. Running Bochs is easier if you use a configuration file (we call it bochsrc). See [Section 4.3](http://docs.google.com/bochsrc.html) for all supported options.

The easiest way to setup Bochs for the first time is to use the example configuration file called bochsrc-sample.txt. Locate that file (location depends on the (host) OS and on the installation facility used) and copy it to a location where Bochs looks for that file, see [Section 5.2](http://docs.google.com/search-order.html).

The next step is to change the configuration so that it fits your needs: You most likely want to setup a hard disk (see [Section 8.21](http://docs.google.com/using-bximage.html) and [Section 4.3.21](http://docs.google.com/bochsrc.html#BOCHSOPT-ATA-MASTER-SLAVE)), and install some OS on it using either a set of floppy disks (see [Section 4.3.19](http://docs.google.com/bochsrc.html#BOCHSOPT-FLOPPYAB)) or a CD-ROM (see [Section 4.3.21](http://docs.google.com/bochsrc.html#BOCHSOPT-ATA-MASTER-SLAVE) again) as installation media. Make sure you boot the emulation from the media you want, using the right setting as [boot option](http://docs.google.com/bochsrc.html#BOCHSOPT-BOOT).

If your keyboard output inside of Bochs is wrong, you may also need a keymap file to remap your keyboard layout to the U.S. layout. A set of keymap files for the X window system and SDL (Linux port) is distributed with Bochs. If your keyboard layout is not supported yet, you can create your own one by following the instructions given in [Section 4.4](http://docs.google.com/keymap.html).

A collection of disk images of different operating systems can be found at <http://bochs.sourceforge.net/diskimages.html>. Some disk images are the size of a floppy disk (1 meg compressed) and others are gigantic (160 meg compressed). If you want to create a disk image yourself, please see [Section 8.2](http://docs.google.com/diskimagehowto.html).

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