Burning Red Hat CDs with our CD Writer

1 Background

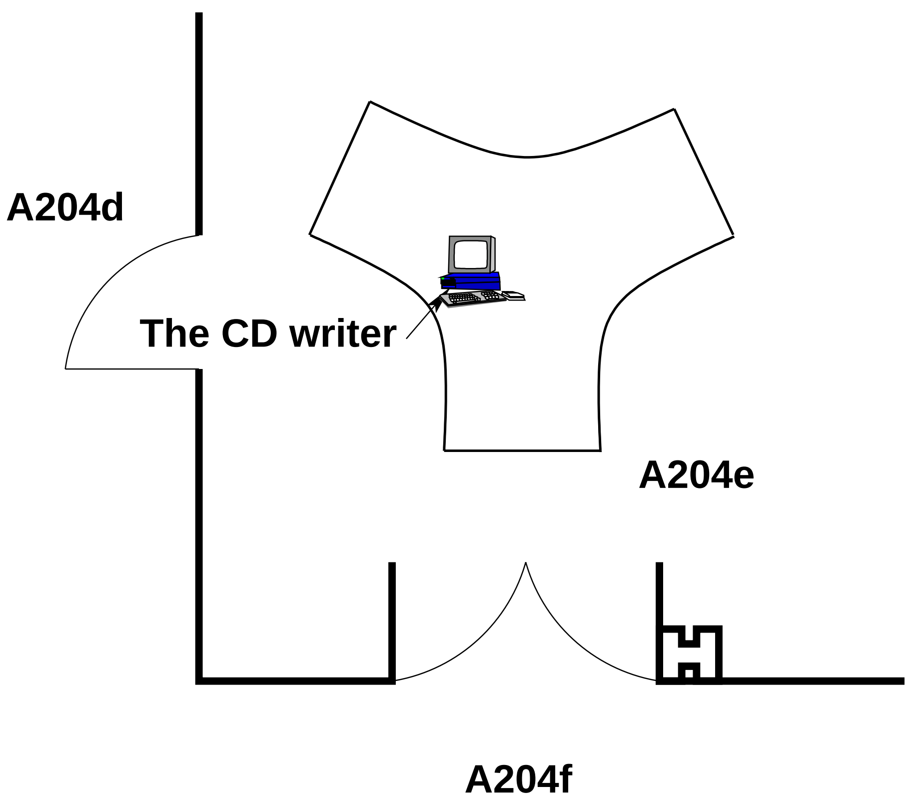

Figure 1: The location of the CD writer in A204e (November 2002).

We have installed a CD writer on a computer which is currently near the entrance to A204e. I want all of you to install Red Hat 8.x Linux on your machines at home. You will need to burn your own CDs. This is a quick guide to burning ISO images onto CDs in A204e. There is also a nice program called `xcdroast` for burning cdroms where you need to construct the ISO image yourself.

1.1 Some considerations

The problem is that we need the ISO image on the local hard disk to start burning it onto your blank CD-R.. Suppose the image you need is not there? The quickest solution is to copy the image over the network from our server. We will see how to do that using the important tool `rsync`.

2 Procedure

1. Go to the computer that is close to the entrance to A204d and A204f; see figure 1.
2. When you start the machine, select Linux from the boot menu (at the moment, the default is Linux).
3. Log in using your own ICT account, using your student number as user name, and your own password.
4. Decide what disk you want to burn
5. Look to see if it is already present in the image directories

   `$ ls -l /cdimage`

6. If not, then:

   (a) If there is not enough space, delete an image that you do not want with a command like

   `$ rm /cdimage/valhalla-i386-SRPMS.iso`

   you want to make sure that there is enough space in that partition to hold the CDROM image, i.e., more than 650 MB. To find how much space is available, type:

   `$ df`

   The **d**isk **f**ree command shows the space on each partition in units of one kilobyte.

   (b) Change to the directory where you will put the image (it should be `/cdimage`). Do *not* put it into your home directory; the location should be a local drive, not a network drive.

   (c) Copy the image that you want with a command like this:

   `$ rsync -avz --progress ictlab::rh80iso/psyche-i386-disc1.iso .`

   Notice the dot "**.**" at the end! That represents the current directory, the destination for the copy operation. The transfer took about two minutes for me.

7. I have written a simple script to burn the images. To use it, type:

   `$ burn-cd` ⟨*filename*⟩

   where ⟨*filename*⟩ is the name of the iso image you want to burn to the cd writer.

   You can see the script in `/usr/bin/burn-cd`.

8. Wait about eight minutes for the disk to be written. During this time, *do not start any big programs*, in fact, do not disturb the machine too much, since this computer does not have much RAM and it is an old PII, and it has to work hard to keep providing the CD writer with data.
9. The disk will eject when writing is finished.

3 More about the `rsync` command

The `rsync` program is amazingly useful (I use it many times every day). It is perfect for making *mirrors* of:

- web sites
- your work
- . . . and everything else!

(A mirror is an exact copy, usually made over a network).

`rsync` is actually a network protocol that is clever in that it compares all the files at the source and destination, and only sends the parts of files that are different. It also can compress the data, so saving a lot of bandwidth. You can also use it with `ssh`, and connect to a Secure Shell server and transfer data over the Internet, which is the way I most often use it.

`ictlab` is an `rsync` server as well as a web, NFS and ftp server. It has a few areas accessible by `rsync`.

To find all the areas available from an `rsync` server:

```
$ rsync -av ictlab::
ftp             ftp area
rh73            Red Hat 7.3
rh73iso         Red Hat 7.3 ISO (CDROM) images
rh72eeiso       Red Hat 7.2 Enterprise Edition beta
rh72            Red Hat 7.2
rh72iso         Red Hat 7.2 ISO (CDROM) images
rh72dociso      Red Hat 7.2 documentation ISO (CDROM) images
rh71            Red Hat 7.1
rh71iso         Red Hat 7.1 ISO (CDROM) images
rh8             Red Hat 8.0
rh8iso          Red Hat 8.0 ISO (CDROM) images
rh8isodoc       Red Hat 8.0 documentation ISO (CDROM) image
```

To list all the files in the top level directory `rh80iso`:

```
$ rsync ictlab::rh80iso
drwxr-sr-x        4096 2002/09/27 03:03:17 .
-rw-rw-r--         280 2002/09/18 03:40:02 MD5SUM
-rw-rw-r--         280 2002/09/18 03:40:02 MD5SUMS
drwxr-sr-x        4096 2002/09/27 02:35:58 doc
-rw-rw-r--   675315712 2002/09/11 04:48:53 psyche-i386-disc1.iso
-rw-r--r--   666271744 2002/09/11 04:50:23 psyche-i386-disc2.iso
-rw-r--r--   677609472 2002/09/11 04:51:56 psyche-i386-disc3.iso
-rw-r--r--   626262016 2002/09/11 04:55:48 psyche-i386-disc4.iso
-rw-r--r--   679542784 2002/09/11 04:59:10 psyche-i386-disc5.iso
```

To download disk 1 of Red Hat 8.0:

```
$ rsync -avz ictlab::rh80iso/psyche-i386-disc1.iso .
```

To download disk 2 of Red Hat 8.0:

```
$ rsync -avz ictlab::rh80iso/psyche-i386-disc2.iso .
```

You will also need to download disk 3 of Red Hat 8.0:

```
$ rsync -avz ictlab::rh80iso/psyche-i386-disc3.iso .
```

I recommend that you get yourself a copy of the documentation CD:

```
$ rsync -avz ictlab::rh8isodoc/docs-8.0-i386.iso .
```

To get help about `rsync`, type: `man rsync`. Of course, if you want to know any details about how to use it for a particular purpose, then you can always ask Nick Urbanik `<nicku@vtc.edu.hk>`.