

NMR NOTES #20

Drag-N-Drop Data Storage

The Red Hat workstations can easily store NMR data on either CD-R/W disks or USB memory devices, using a simple 'drag-n-drop' user interface. It is important that if you are going to use either a recordable CD or a USB device, that you login on the workstation before inserting your device. If you are not logged on to the system console first, the device is owned by root and you cannot then unmount it.

Log in on the workstation and insert either a USB device in a USB port or a recordable CD in the CD-R/W drive. You should get an icon on your desktop for that device. In the case of a blank CD, it is a generic '**Blank CD-R Disc**' icon, and in the case of a USB device it will have the manufacturer's name for that device. In either case you can double click on the icon to open the device, if it did not open automatically. The blank CD folder will be labelled as '**CD/DVD Creator Folder**' and will have a grayed out '**Write to Disc**' button. Once you copy data to that folder, the button is no longer grayed out.

If the USB device does not automatically mount, there may be a problem with the Linux daemon that does the automounting. In this case, remove the device from the USB port and run the command **su fixusb** in a terminal window. This will stop and restart the appropriate daemon, and you can then re-insert the USB device. It should mount at that point.

You then open your file manager, the desktop folder named '**<username> home**', navigate that folder to the files that you want to backup, and simply drag those files to the destination, using the left mouse button. You can create folder on the destination if you want to sort and organize your data while archiving it.

Once you have moved your data to the destination device, you need to unmount and remove it. In the case of the recordable CD disk, click on the '**Write to Disc**' button to actually write the data to the CD and eject it. In the case of a USB device, simply close the folder, right click on the desktop icon, and select '**unmount volume**' and the device will be unmounted and the icon removed from the desktop. You may then remove it from the USB port. You can also left click the '**File**' menu on the USB folder to get a menu item to unmount the volume. Either one will work. When you write to a CD, the disc is closed and you cannot write any additional data at a later time. Note that it is not necessary to have VnmrJ running while storing or archiving this data – everything is done by the Linux operating system.

To access your data on either a CD or a USB device, login to workstation and insert the device just like above. A CD with data will act the same way as a USB device does, except that you cannot write additional data to the disc. You can open VnmrJ and use the file browser or the file open menu to navigate to your device to open files. The devices are all mounted in the **/media** directory, so navigate up the directory structure until you get to the root directory, then move down into media to find your device.

Since you can have both a USB device and a CD-R disc mounted at the same time, you can archive data from a memory stick, your /nmrdata directory if you have one, as well as your home directory onto the CD-R disc.

It is also possible to use the same procedure to write DVD's, using DVD+R media. There is currently no reliable method for writing multisession DVDs, so you would have to write a full 4.7 GB at once to use the entire DVD.