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Taking a quick look at 'Severn'.

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Note: this article takes a quick look at 'Severn' and does not claim to be complete. More information can be found in the release notes and on the developer mailing lists of Red Hat. They can be found at http://www.redhat.com.

Content.

'Severn'.

'Severn' or Red Hat Linux 9.0.93/x86 is the latest (beta) release from the Red Hat Linux Project (http://www.redhat.com). It is available through all the official mirror sites (beta directory).

Remember that this is still a beta release and is NOT intended for use on production systems or for day to day usage. The main purpose of a beta release is to get feedback from the testers.
If you would encounter problems or issues, send your feedback through http://bugzilla.redhat.com/bugzilla.

If you would have some severe problems with the installation of Severn (normally not), consult the release notes and report your problem online.

Images included in this file.

Severn installation requirements.

Severn requires 'at least' a 200 Mhz Pentium-class CPU with 64 MB RAM for text-mode and a 400 Mhz CPU with 128 MB RAM for graphical usage. The installation schemes stayed the same. You have the choice between a custom installation (requires at least 475MB hard disk space), server installation (requires at least 850MB hard disk space), the personal desktop selection (1.7 GB hard disk space) or the complete package (eating around 5 GB of hard disk space). Also consult the hardware compatibility list of Red Hat 9 on http://www.redhat.com.

Severn installation: easy.

The installation of Severn does not contain a lot of changes compared with the installation of Red Hat Linux 9, so we will quickly browse through it (I did a graphical installation on the test machine). You can find images from the console based installation at the end of the article.

Some new installation 'tricks':
- Support of the graphical installation when using HTTP or FTP for installation.
- Support of VNC during the installation of Severn (consult the release notes).

First of all, make sure that you have obtained all the needed installation media (CD set, floppies) to do the installation and when needed; a listing of your hardware and a decent backup.
After all, this is still a beta version.

Boot from your first CD. You will be greeted by a small graphical screen announcing 'Red Hat Linux BETA' and offering the default boot options (main, options, general, kernel, rescue).
Enter to boot and the stock kernel will start to load.
You will also be offered – like with RH 9 - the chance to test your installation media for faults, before starting the installation (checks on CD, DVD, hard drive ISO and NFS ISO are supported). It is advised to do check your installation media before starting (things that seem to be bugs can be caused by bad installation media). You can also start this check from the boot prompt ("boot:") by using "linux mediacheck".

After the media check, hardware probing will start and will try to identify the hardware that you have on your machine. On the test machine, it worked flawless (as expected) and discovered an ATI Rage 128 card, an IBM 6546 G52 screen and a PS/2 wheel mouse to start with.

The graphical install wizard will kick in, greeting you and offering a splash screen of Red Hat Linux 9.0.93.
Before you can install with the installation of the beta, you need to acknowledge that you are installing a beta version of the software.

Graphical installation continues flawlessly by choosing your language, keyboard layout and mouse configuration. The installation wizard will then search for possible, already existing Red Hat Linux installations and will offer you the chance to upgrade it or to perform an entirely new installation.
On the test machine it offered the chance to upgrade Shrike (RH 9), but we went for the new installation.

When you install from scratch, the normal choices between 'Personal Desktop', 'Workstation', 'Server' and 'Custom' will appear. On the test machine, we choose the 'Workstation' installation option using automatic partitioning, removing all previous partitions on the system.
Like Shrike, the default boot loader is GRUB, but it still offers you the possibility to install LILO or no boot loader at all.
The configuration of your NICs (Network Interface Cards) - including the basic firewall setup ("high", "medium", "No firewall", "Customized") and additional language selection is next, followed by your time zone selection and root password configuration.
Started by a dependency check, the packages will be installed without any problem.
At the end of the installation process, the system will ask you to create a rescue disk (always a good idea) and will then reboot at your command.

Booting Severn for the first time.

After a reboot the Grub boot loader will come up with "Red Hat Linux (2.4.21-20.1.2024.2.1.nptl)" and will start running it.

There are some minor changes to be noted down during the boot process (visual). During the boot process, you will see for some seconds the standard boot messages fly by but these are replaced very shortly by an all graphical, grey, boot screen telling the user that it is starting the system services and probing for new hardware.

After this, the Red Hat Linux 9 wizard comes up, like it did with Shrike (RH9) to configure your date and time, to set up a regular user account, to subscribe with the Red Hat Network (RHN) and to finish off the installation.
The 'new' thing in this section can be found under the section of the user account, the tab "use network login", offering the chance to login through NIS, LDAP, Hesiod and their authentication through network login with LDAP, Kerberos, SMB (defining the workgroup and the according domain controllers).

That's it, the result is your familiar graphical login screen.

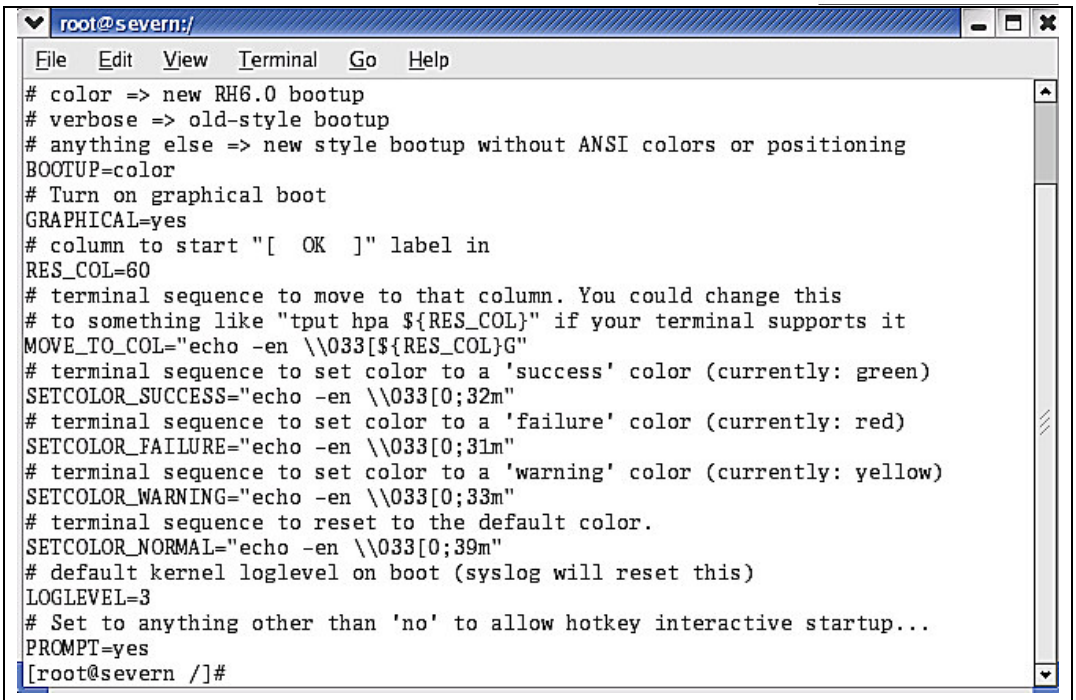

Figure 1 Turning off the graphical boot screen.

Removing the graphical boot screen.

If you want to disable the graphical boot screen (which seems to have some issues with Kudzu hardware probing with this beta), edit the file "/etc/sysconfig/init" and set "no" in the line containing "GRAPHICAL". You can also disable graphical booting at boot time using "nogui" at the boot loader command line.

Security notes.

The Sendmail mail transport agent (MTA) does not accept network connections from any host other than the local computer (see release notes for more information).

More exciting is that the stock kernel includes new "Exec-shield" functionality (http://redhat.com/~mingo/exec-shield/). This feature provides enhanced protection against stack, buffer or function pointer overflows and against other types of exploits that rely on overwriting data structures and/or putting code into those structures. The patch makes it harder to pass in and execute the so-called 'shell-code' of exploits.
It is also important to note that the patch works transparently, making recompilation of applications unnecessary.

The Red Hat Linux 9.0.93 kernel makes it also possible to prevent that kernel modules are being loaded. This can be very useful system administrators who want to make sure that only a controlled set of modules are and can be loaded (see release notes for more information).

Other small changes.

Far from complete mentioning all the visual changes at this point; there is a new panel in town, allowing every user to change the screen resolution (it appears that you don't need to be root in order to change your resolution).

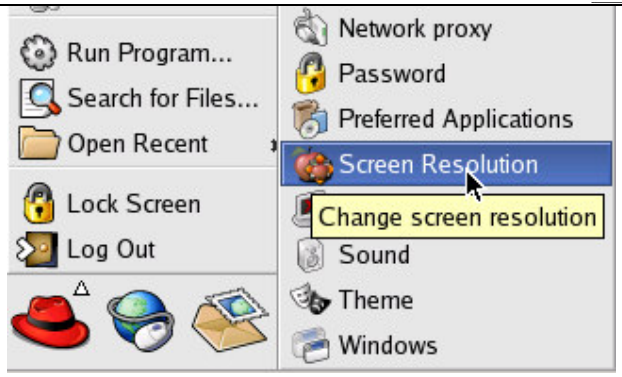

Figure 2 Changing screen resolution.

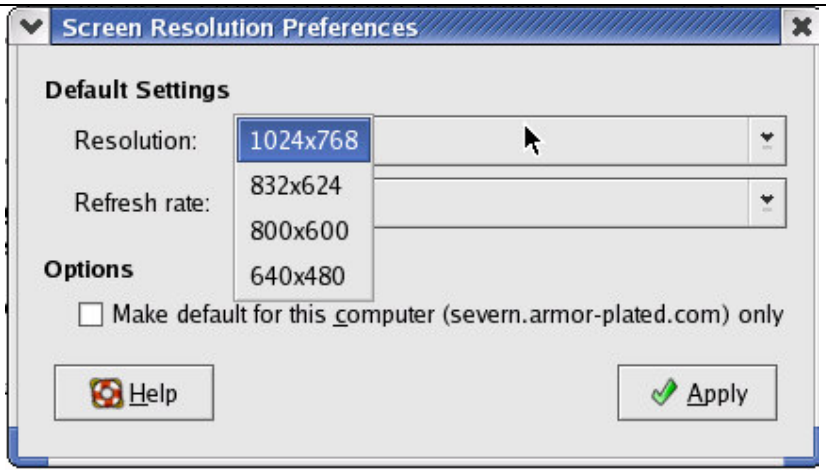

Figure 3 The screen resolution changer.

Release path?

According to some information sources (and also the banners during the graphical installation process of the beta version), Red Hat Linux beta's should be released on July, 21st – August, 8th – August, 18th and September, 15th. The stable release should go public on October, 6th.

Screenshots.

This section provides some screenshots taken during the installation process of Severn (console based).
Note: they are probably only useful for someone who has never seen a (RH) Linux installation. There is almost no change from previous Red Hat installations and – like the graphical installation - caused no problems at all. Everything went smoothly.

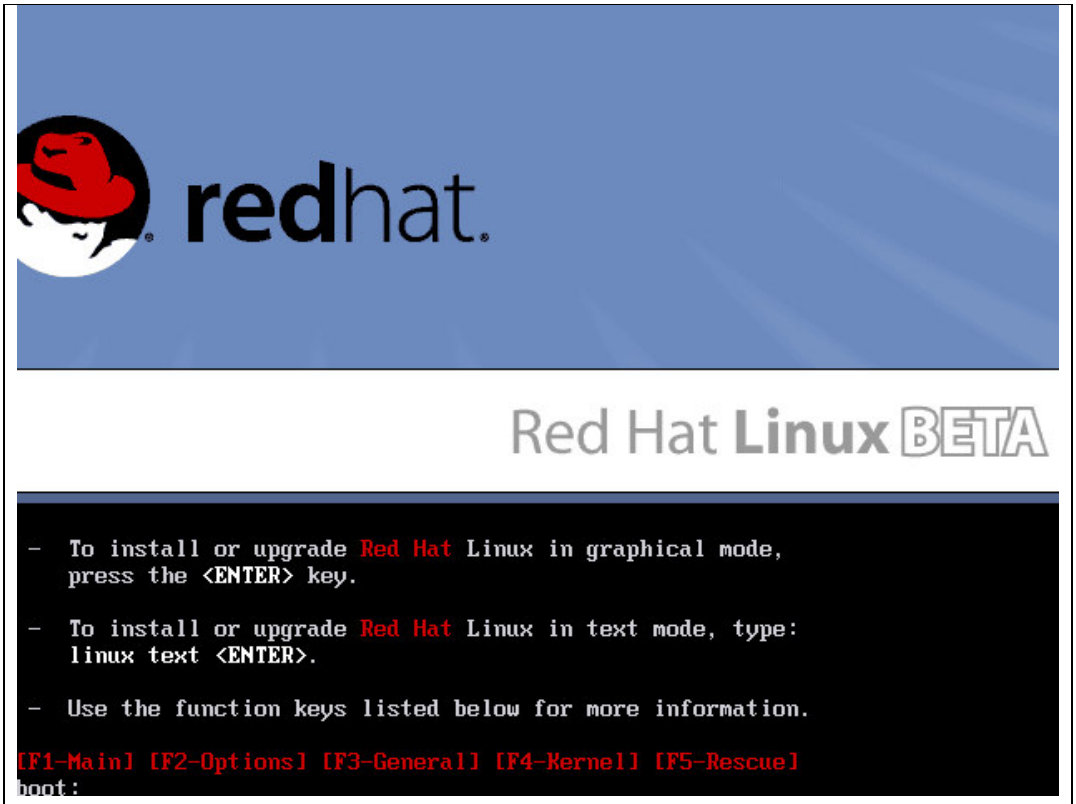

Figure 4 Severn boot screen.

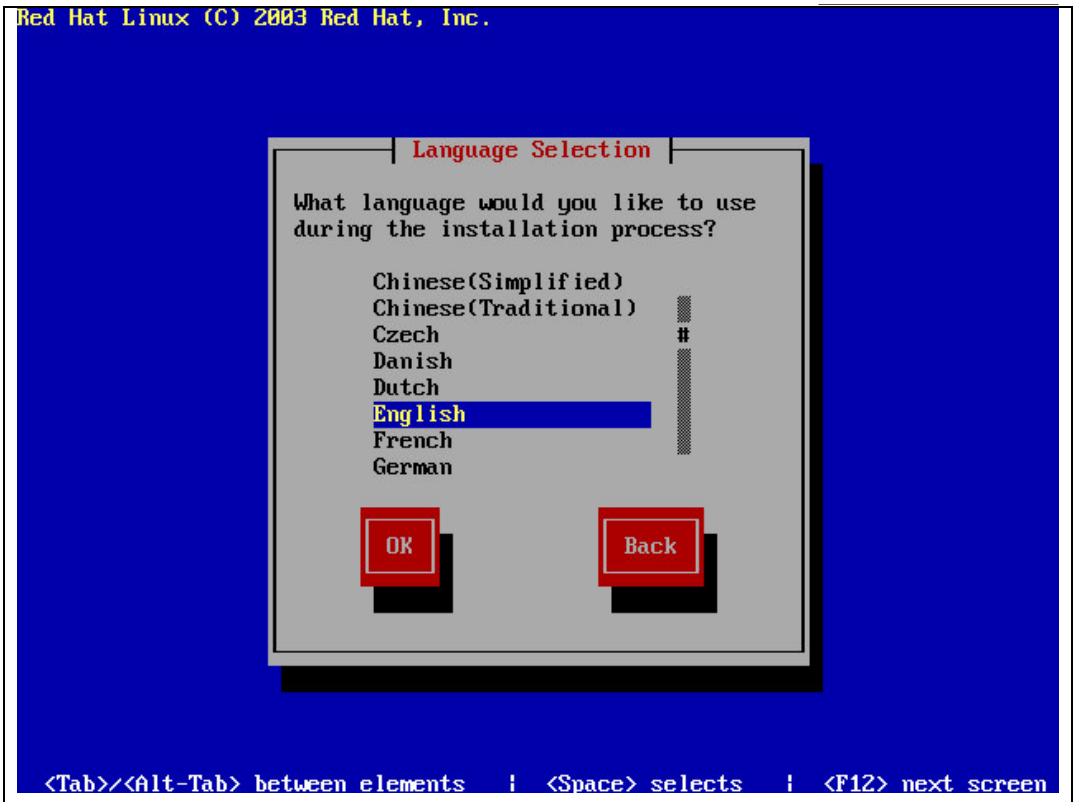

Figure 5 Language selection (used during the installation).

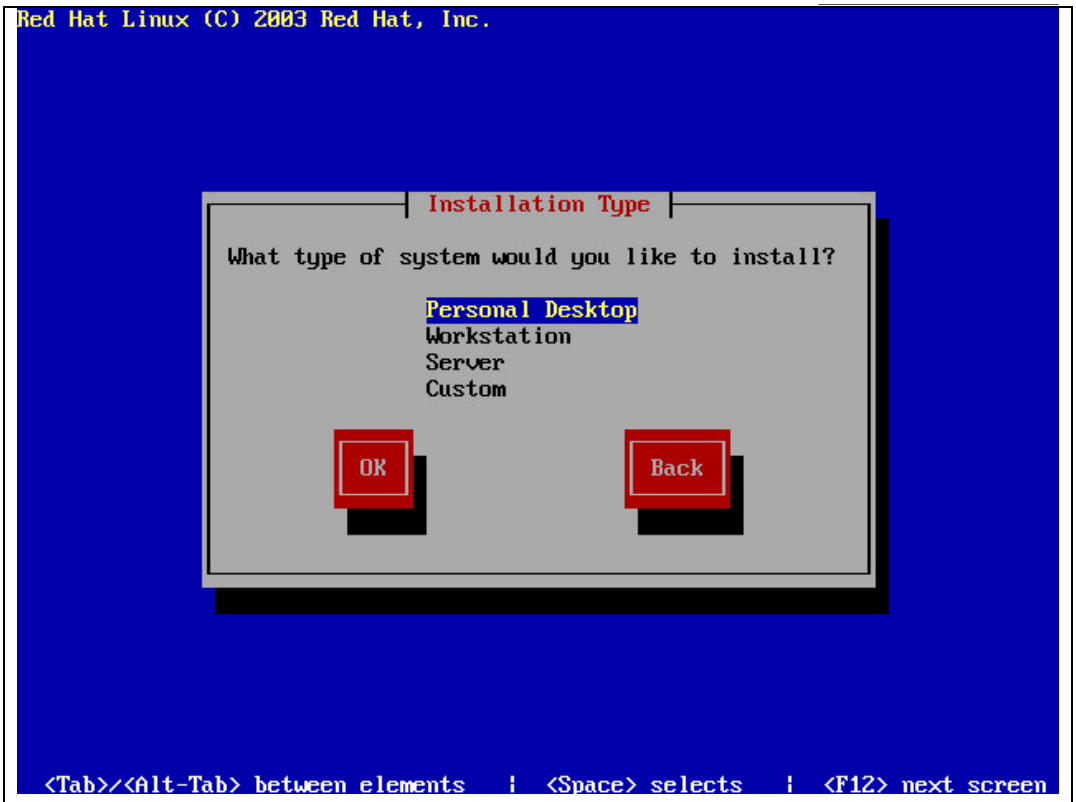

Figure 6 System type installation.

Figure 7 Partitioning.

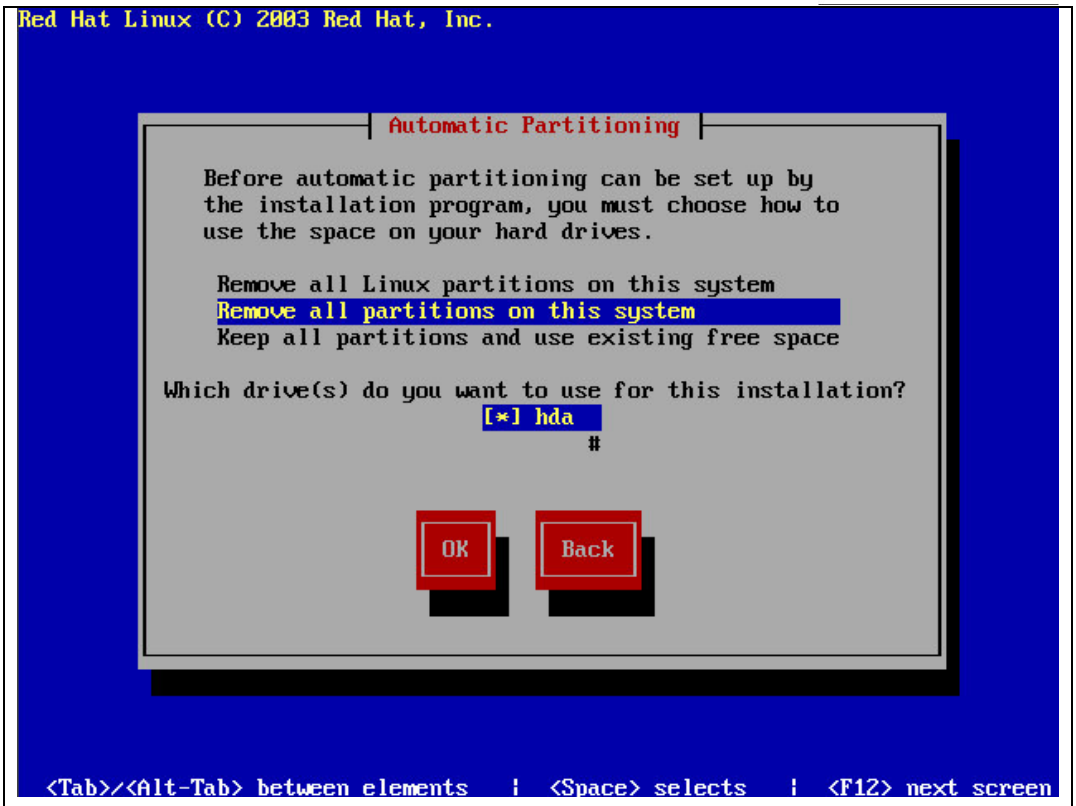

Figure 8 Partitioning.

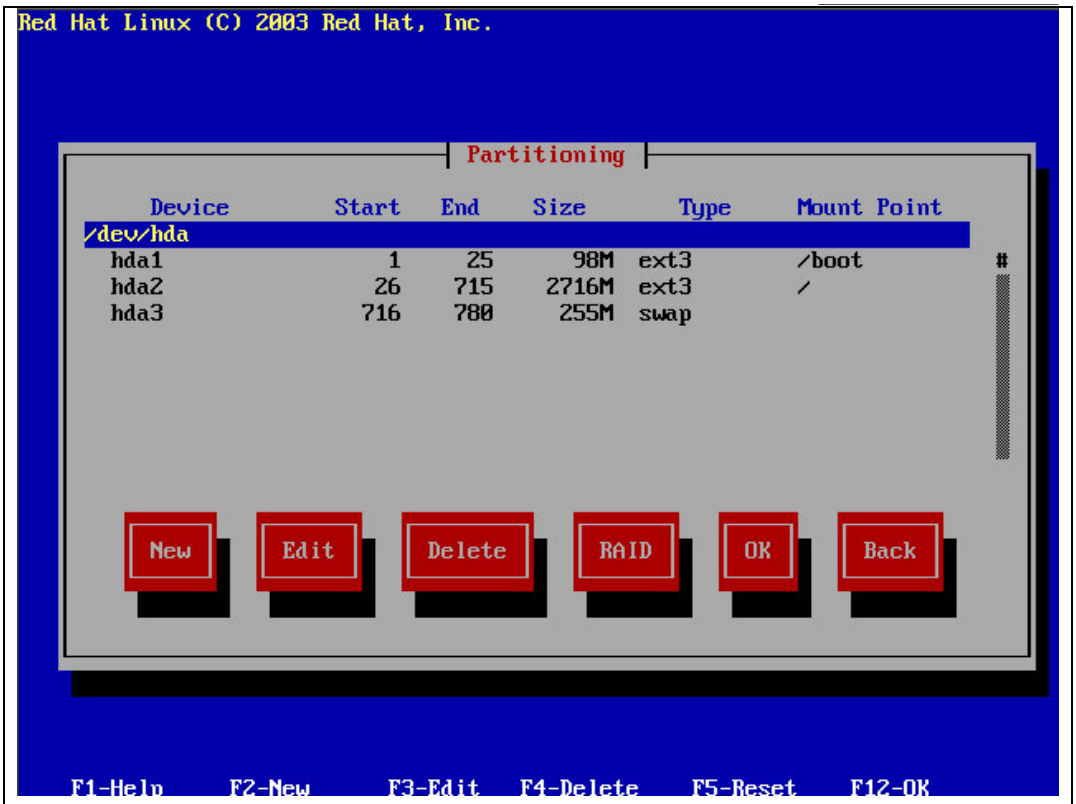

Figure 9 Partitioning.

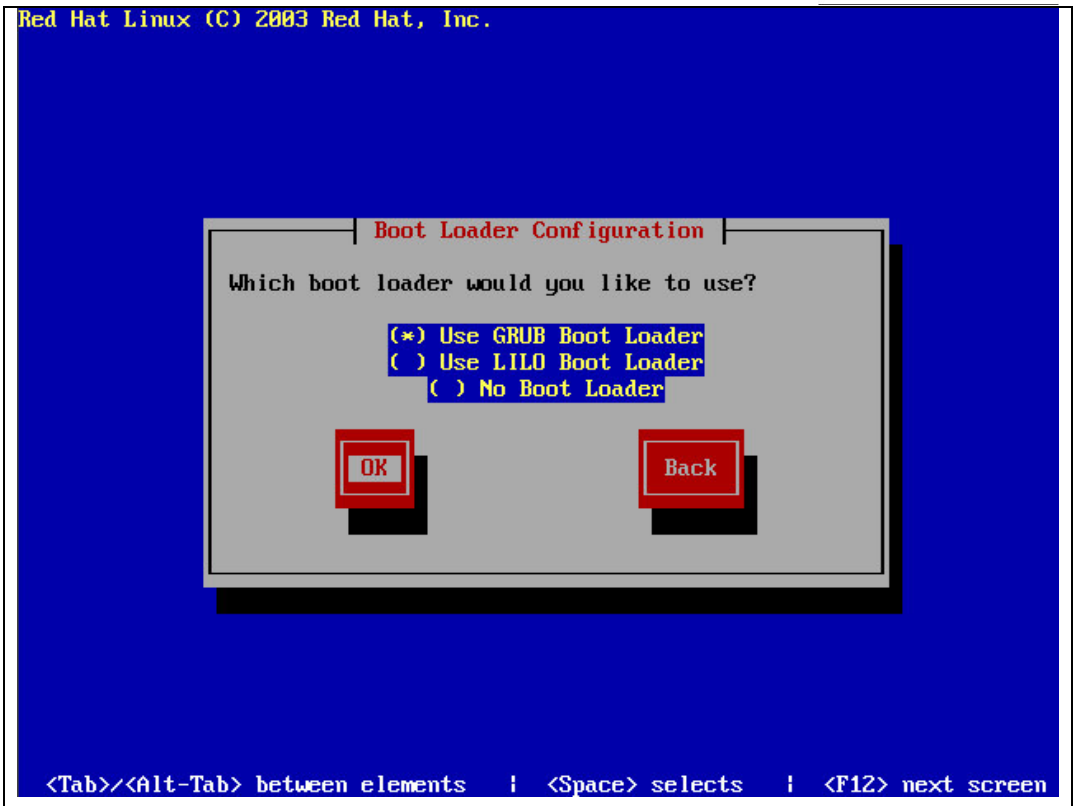

Figure 10 Bootloader selection.

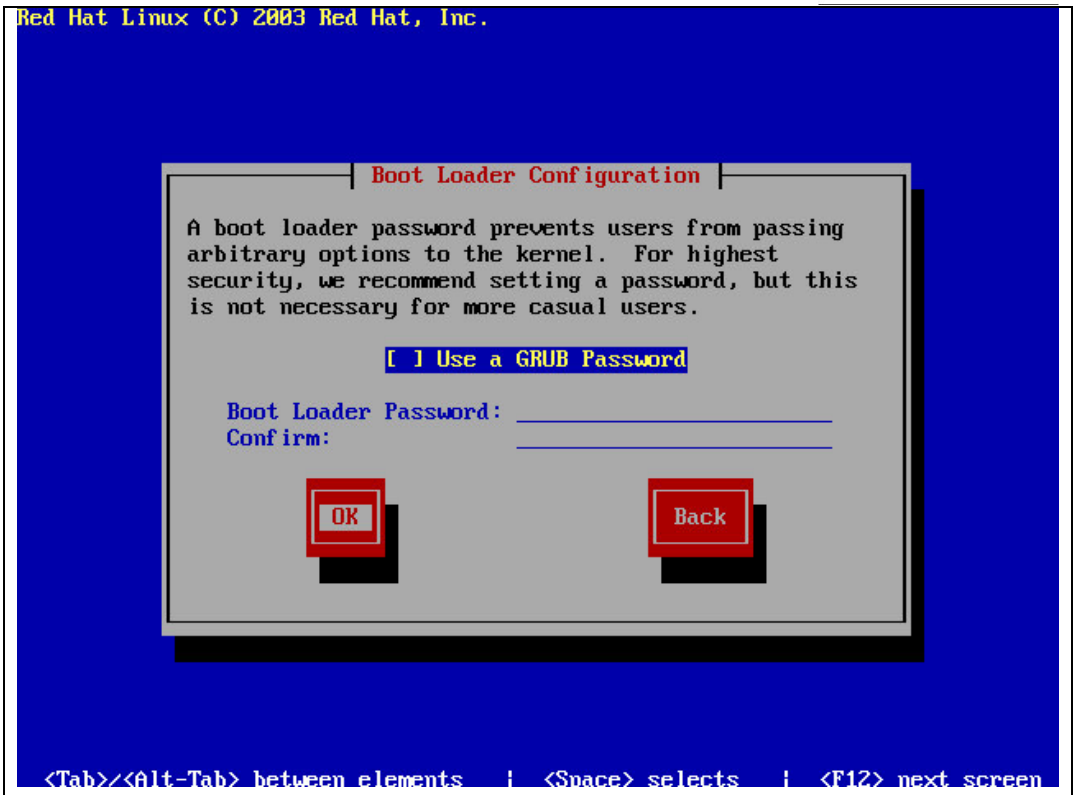

Figure 11 Setting a boot loader password.

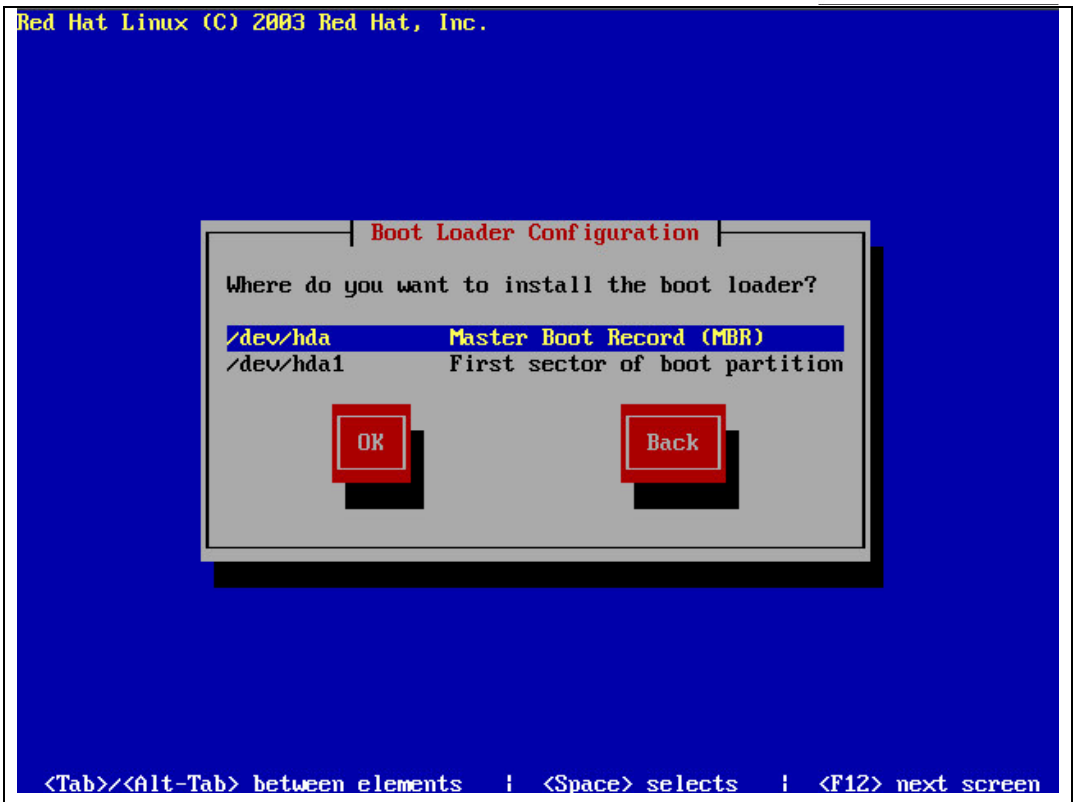

Figure 12 Installation of the boot loader.

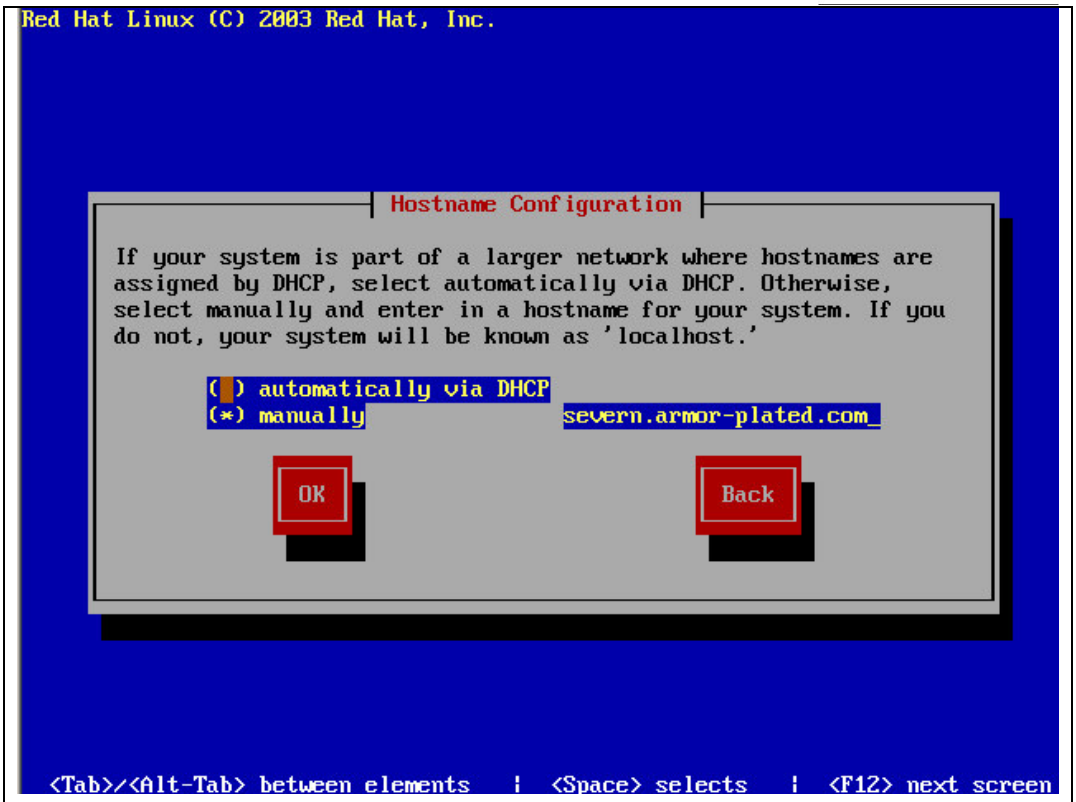

Figure 13 Network configuration.

Figure 14 Basic firewall configuration.

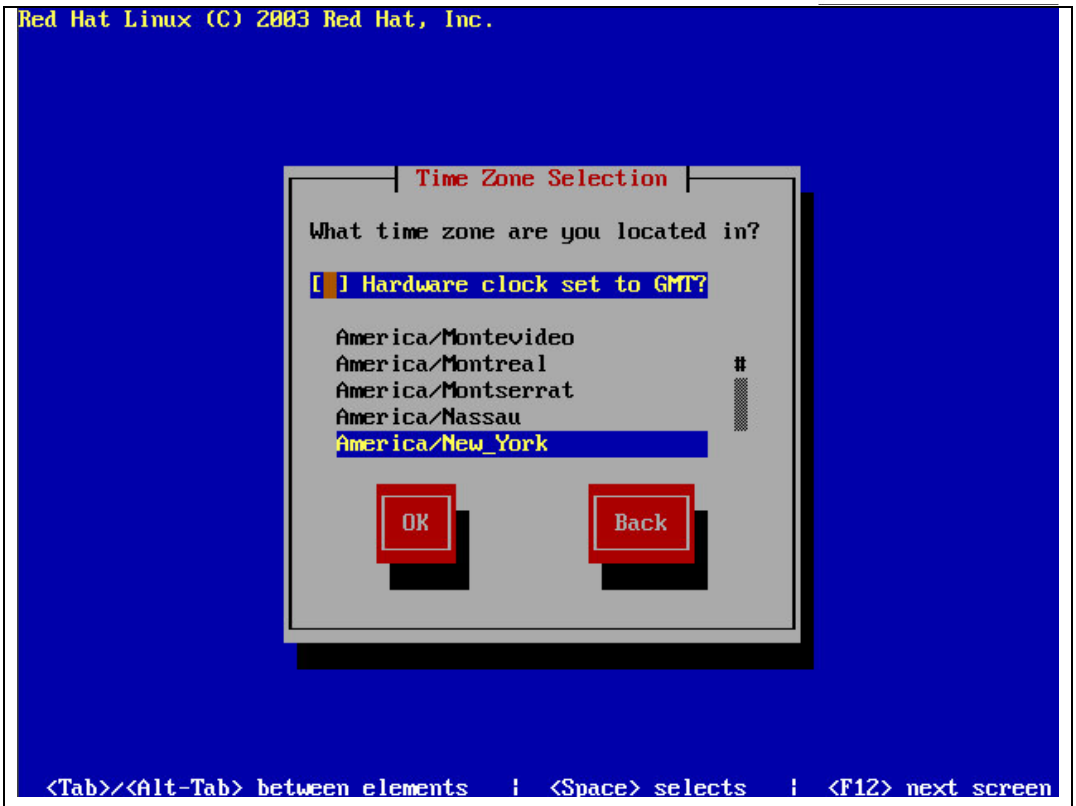

Figure 15 Time zone configuration.

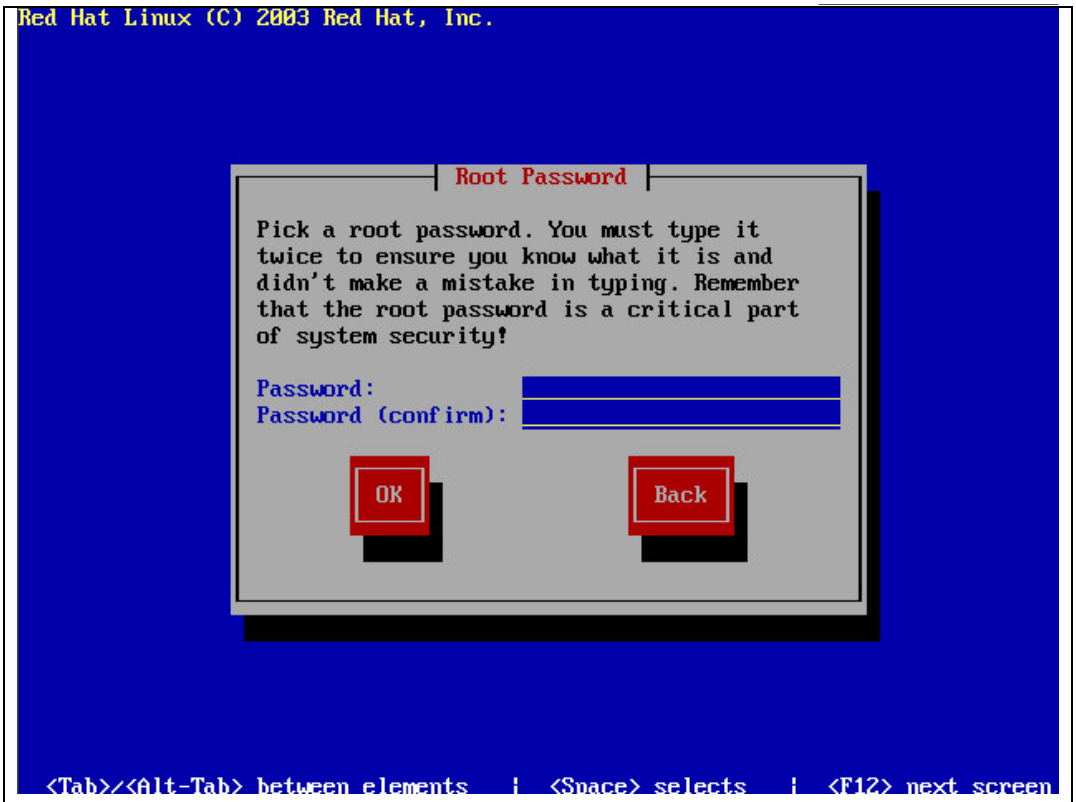

Figure 16 Root password configuration.

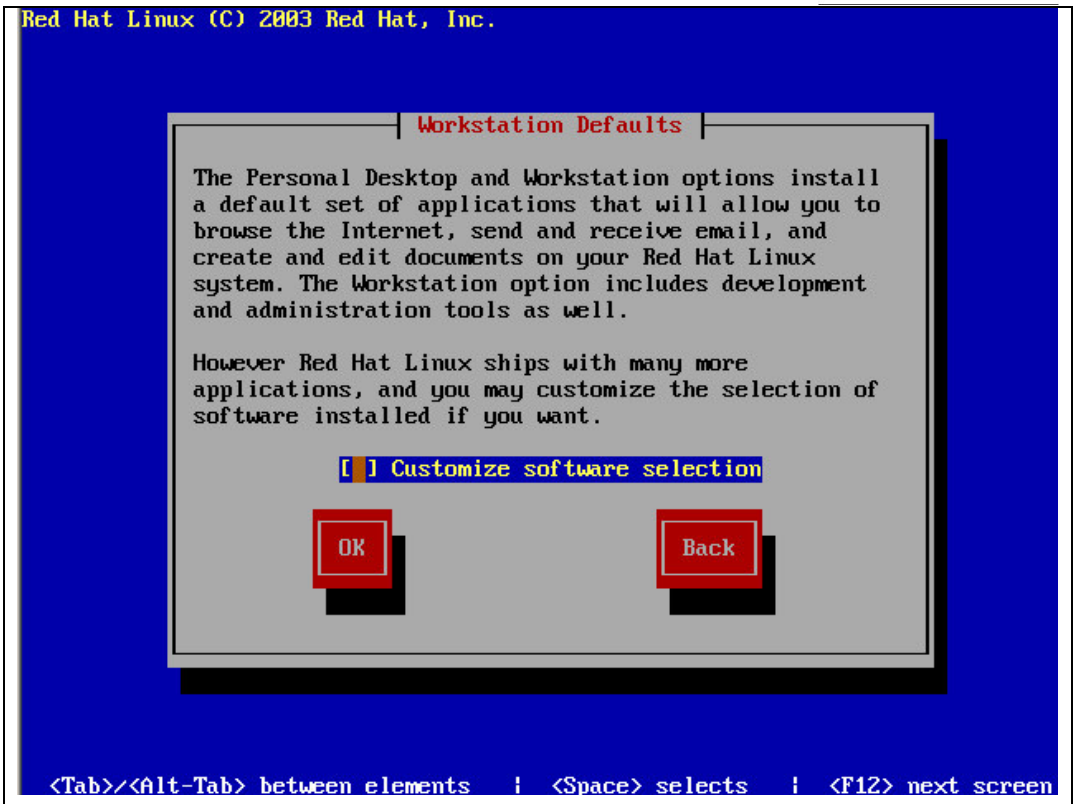

Figure 17 Customizing installation packages.

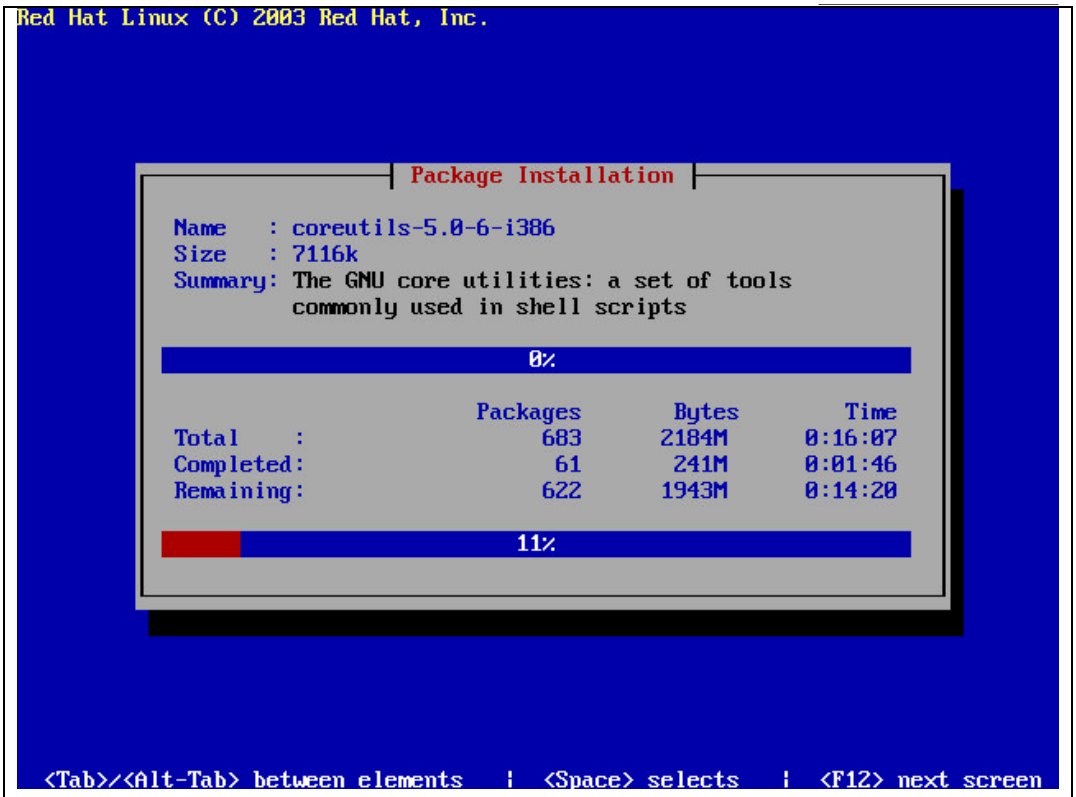

Figure 18 Package installation.

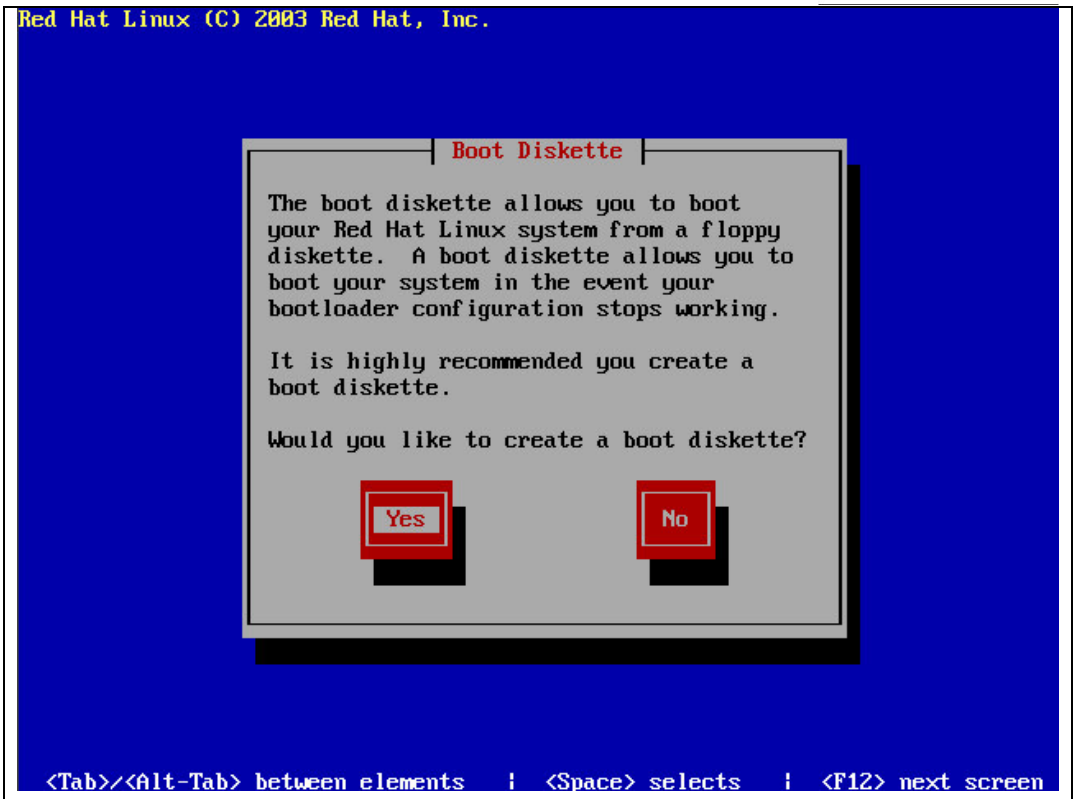

Figure 19 Creating a rescue disk (always a good idea).

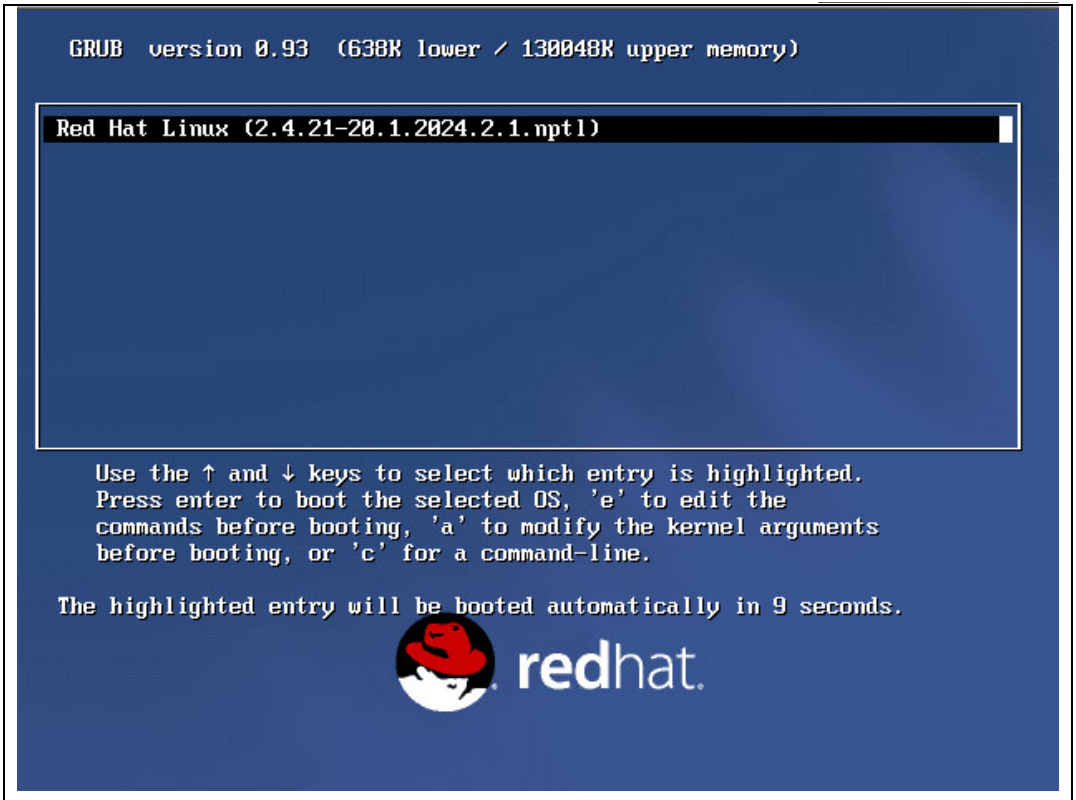

Figure 20 GRUB.

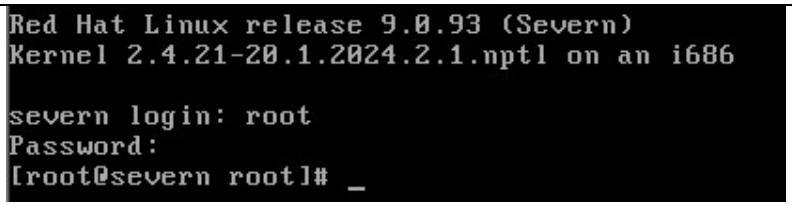

Figure 21 Severn shell.

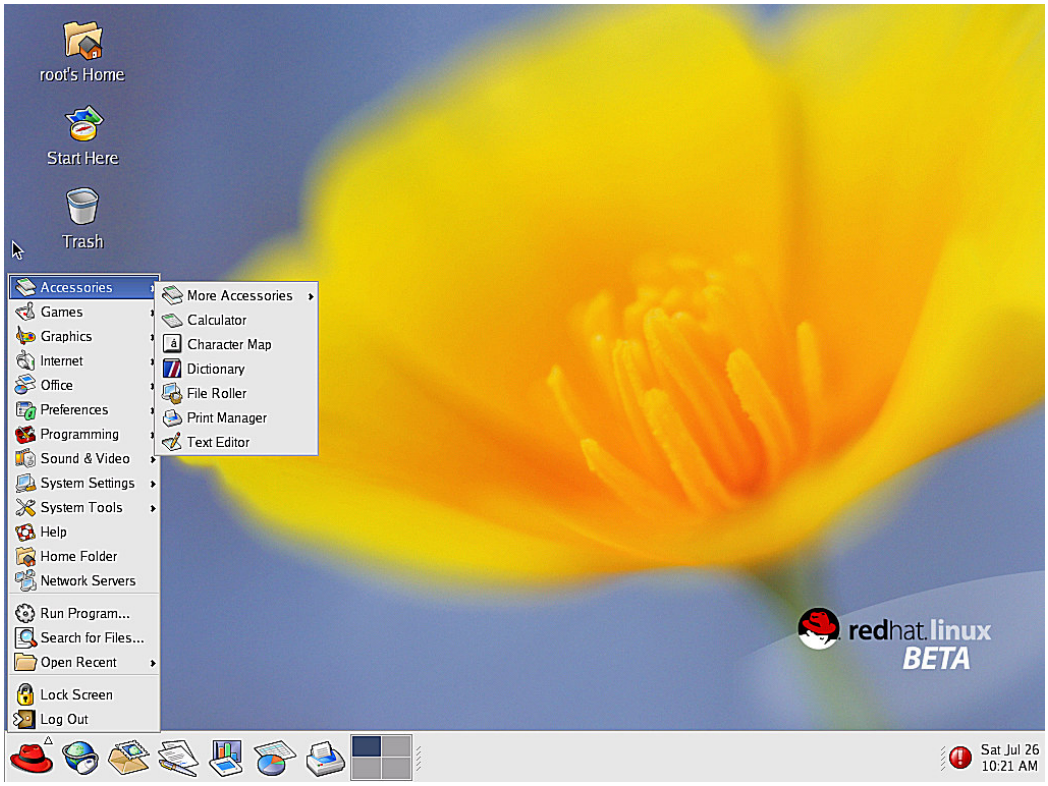

Figure 22 Severn, running the default desktop.

Related Links.

- Red Hat, http://www.redhat.com.
- Red Hat Linux Project, http://rhl.redhat.com.
- Red Hat Linux 9.0.93 release notes, consult mirroring site or disks.
- Red Hat Linux/x86 9.0.93 (Severn) README, consult mirroring site or disks.
- More information on Exec-shield (Ingo Moldar): http://people.redhat.com/mingo/exec-shield/ANNOUNCE-exec-shield.
- Red Hat mirrors, http://www.redhat.com/download/mirror.html.
- Belgian Red Hat mirror sites: ftp.belnet.be, ftp.redhat.skynet.be,…