

# Instalando/Compilando o Minix na máquina virtual

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# Sumário

- Instalação do Minix 3.1.4 no Qemu
- Configuração do Minix
- Compilação do Minix

# Download do Minix 3.1.4

O Minix 3.1.4 pode ser baixado em

<http://pet.inf.ufsc.br/~pet/minix314.iso>

# Criação da imagem de disco

Basta executar o seguinte comando para criar uma imagem de disco de 1.5GB:

```
qemu-img create minix.img 1.5G
```

# Instalando o Minix na máquina virtual

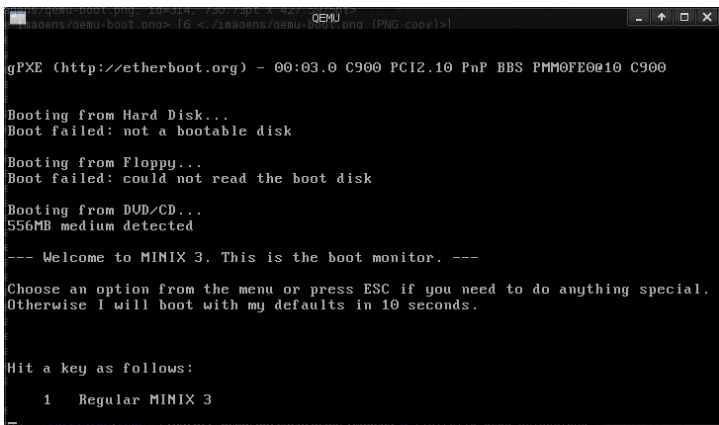
Para executar o Qemu pela primeira vez com a imagem de CD do Minix:

```
qemu -localtime -net user -redir tcp:22000::22 -net  
nic,model=rtl8139 -m 256 -hda minix.img -cdrom minix314.iso
```

## Sugestão:

Crie um arquivo de nome `qemu-install` contendo o comando acima e dê permissão de executável. Assim você pode executar a instalação com um simples `./qemu-install`

# Instalando o Minix na máquina virtual



```
is/qemu-boot.png: 10=314, 730, 73pt x 427
imagens/qemu-boot.png> [6 < ./imagens/qemu-boot.png (PNG copy)>]

gPXE (http://etherboot.org) - 00:03.0 C900 PCI2.10 PnP BBS PMM0FE0010 C900

Booting from Hard Disk...
Boot failed: not a bootable disk

Booting from Floppy...
Boot failed: could not read the boot disk

Booting from DVD/CD...
556MB medium detected

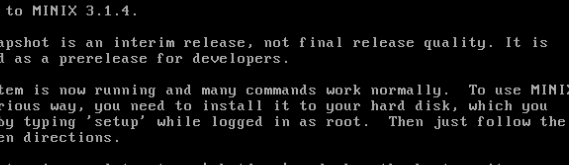
--- Welcome to MINIX 3. This is the boot monitor. ---

Choose an option from the menu or press ESC if you need to do anything special.
Otherwise I will boot with my defaults in 10 seconds.

Hit a key as follows:

    1   Regular MINIX 3
```

Pressione 1 para o boot.



QEMU

img=/dev/zero:boot.png, id=314, vga=73pt,x=427,500,700  
-i /dev/zero:boot.png [6 <./imgens/demu-boot.png (PNG copy)>]

Welcome to MINIX 3.1.4.

This snapshot is an interim release, not final release quality. It is intended as a prerelease for developers.

The system is now running and many commands work normally. To use MINIX in a serious way, you need to install it to your hard disk, which you can do by typing 'setup' while logged in as root. Then just follow the on-screen directions.

After setup is complete, type 'shutdown' and when the boot monitor starts, boot your new system by following the instructions at the end of setup. Keep the CD-ROM in the drive, login as root and type 'packman' to begin installing the many software packages available. After you have installed the packages, type 'xdm' to start X Windows if you have installed it.

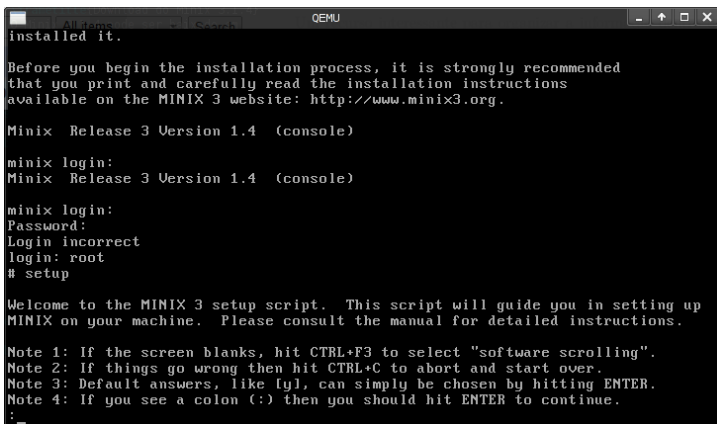
Before you begin the installation process, it is strongly recommended that you print and carefully read the installation instructions available on the MINIX 3 website: <http://www.minix3.org>.

Minix Release 3 Version 1.4 (console)

minix login: root\_

Faca login como root, não há senha no momento.

# Instalando o Minix na máquina virtual



```
installed it.

Before you begin the installation process, it is strongly recommended
that you print and carefully read the installation instructions
available on the MINIX 3 website: http://www.minix3.org.

Minix Release 3 Version 1.4 (console)

minix login:
Minix Release 3 Version 1.4 (console)

minix login:
Password:
Login incorrect
login: root
# setup

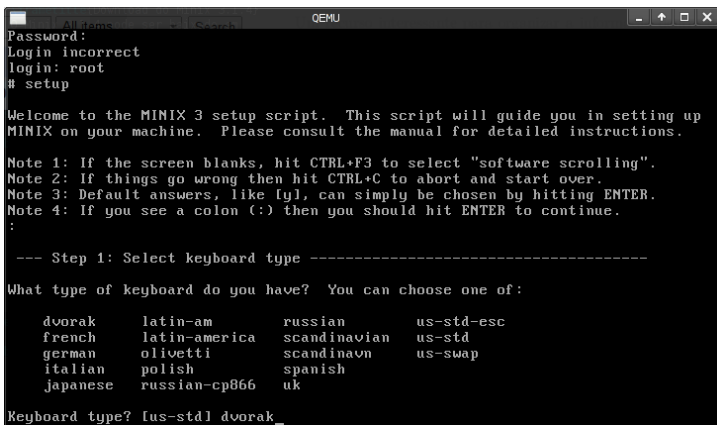
Welcome to the MINIX 3 setup script. This script will guide you in setting up
MINIX on your machine. Please consult the manual for detailed instructions.

Note 1: If the screen blanks, hit CTRL+F3 to select "software scrolling".
Note 2: If things go wrong then hit CTRL+C to abort and start over.
Note 3: Default answers, like [y], can simply be chosen by hitting ENTER.
Note 4: If you see a colon (:) then you should hit ENTER to continue.
:_
```

Rode o comando setup e em seguida pressione enter.



# Instalando o Minix na máquina virtual



```
QEMU
Password:
Login incorrect
login: root
# setup

Welcome to the MINIX 3 setup script.  This script will guide you in setting up
MINIX on your machine.  Please consult the manual for detailed instructions.

Note 1: If the screen blanks, hit CTRL+F3 to select "software scrolling".
Note 2: If things go wrong then hit CTRL+C to abort and start over.
Note 3: Default answers, like [y], can simply be chosen by hitting ENTER.
Note 4: If you see a colon (:) then you should hit ENTER to continue.
:

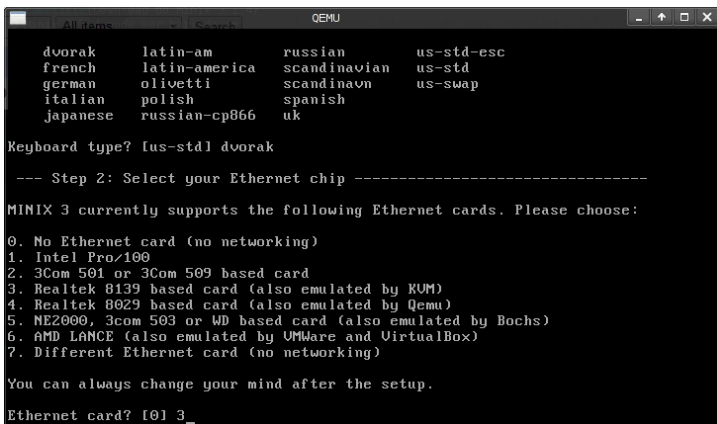
--- Step 1: Select keyboard type -----
What type of keyboard do you have?  You can choose one of:

    dvorak    latin-am    russian    us-std-esc
    french    latin-america    scandinavian    us-std
    german    olivetti    scandinav    us-swap
    italian    polish    spanish
    japanese    russian-cp866    uk

Keyboard type? [us-std] dvorak_
```

Escolha o teclado (para qwerty o mais próximo é o padrão, basta pressionar enter).

# Instalando o Minix na máquina virtual



```
QEMU
All items Search
dvorak    latin-am    russian    us-std-esc
french    latin-amer  scandinavi us-std
german    olivetti   scandinav  us-swap
italian   polish     spanish
japanese  russian-cp866 uk

Keyboard type? [us-std] dvorak

--- Step 2: Select your Ethernet chip -----

MINIX 3 currently supports the following Ethernet cards. Please choose:

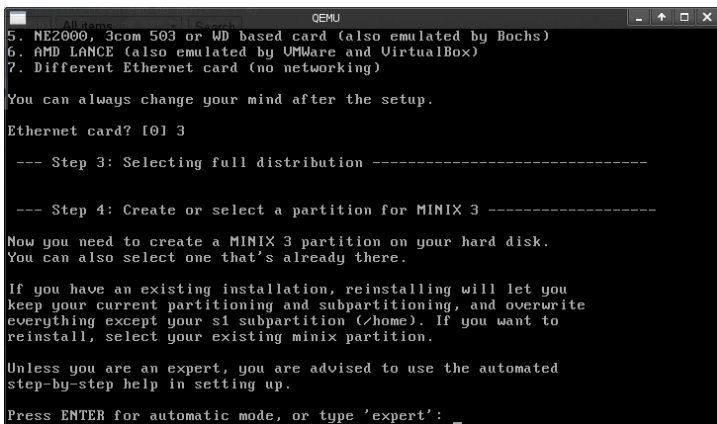
0. No Ethernet card (no networking)
1. Intel Pro/100
2. 3Com 501 or 3Com 509 based card
3. Realtek 8139 based card (also emulated by KVM)
4. Realtek 8029 based card (also emulated by Qemu)
5. NE2000, 3com 503 or WD based card (also emulated by Bochs)
6. AMD LANCE (also emulated by VMWare and VirtualBox)
7. Different Ethernet card (no networking)

You can always change your mind after the setup.

Ethernet card? [0] 3_
```

Escolha a placa de rede. Nas opções do comando para abrir o qemu, foi utilizada a de número 3.

# Instalando o Minix na máquina virtual



```
QEMU
5. NE2000, 3com 503 or WD based card (also emulated by Bochs)
6. AMD LANCE (also emulated by VMWare and VirtualBox)
7. Different Ethernet card (no networking)

You can always change your mind after the setup.

Ethernet card? [0] 3

--- Step 3: Selecting full distribution -----

--- Step 4: Create or select a partition for MINIX 3 -----

Now you need to create a MINIX 3 partition on your hard disk.
You can also select one that's already there.

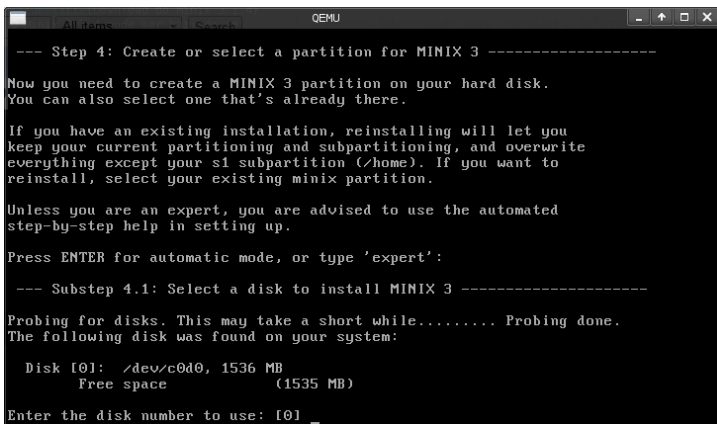
If you have an existing installation, reinstalling will let you
keep your current partitioning and subpartitioning, and overwrite
everything except your s1 subpartition (/home). If you want to
reinstall, select your existing minix partition.

Unless you are an expert, you are advised to use the automated
step-by-step help in setting up.

Press ENTER for automatic mode, or type 'expert': _
```

Pressione enter para o modo automático de instalação.

# Instalando o Minix na máquina virtual



```
QEMU

--- Step 4: Create or select a partition for MINIX 3 -----

Now you need to create a MINIX 3 partition on your hard disk.
You can also select one that's already there.

If you have an existing installation, reinstalling will let you
keep your current partitioning and subpartitioning, and overwrite
everything except your s1 subpartition (/home). If you want to
reinstall, select your existing minix partition.

Unless you are an expert, you are advised to use the automated
step-by-step help in setting up.

Press ENTER for automatic mode, or type 'expert':

--- Substep 4.1: Select a disk to install MINIX 3 -----

Probing for disks. This may take a short while..... Probing done.
The following disk was found on your system:

Disk [0]: /dev/c0d0, 1536 MB
          Free space          (1535 MB)

Enter the disk number to use: [0] _
```

Pressione enter, pois só há um disco

# Instalando o Minix na máquina virtual

```
QEMU
Unless you are an expert, you are advised to use the automated
step-by-step help in setting up.

Press ENTER for automatic mode, or type 'expert':

--- Substep 4.1: Select a disk to install MINIX 3 -----

Probing for disks. This may take a short while..... Probing done.
The following disk was found on your system:

Disk [0]: /dev/c0d0, 1536 MB
Free space          (1535 MB)

Enter the disk number to use: [0]

--- Substep 4.2: Select a disk region -----

Please select the region that you want to use for the MINIX 3 setup.
If you select an in-use region it will be overwritten by MINIX. The
following region were found on the selected disk:

[0] Free space          (1535 MB)

Enter the region number to use or type 'delete': [0] _
```

Pressione enter, pois usaremos o disco todo.

# Instalando o Minix na máquina virtual

```
QEMU
Probing for disks. This may take a short while..... Probing done.
The following disk was found on your system:

Disk [0]: /dev/c0d0, 1536 MB
Free space (1535 MB)

Enter the disk number to use: [0]

--- Substep 4.2: Select a disk region -----

Please select the region that you want to use for the MINIX 3 setup.
If you select an in-use region it will be overwritten by MINIX. The
following region were found on the selected disk:

[0] Free space (1535 MB)

Enter the region number to use or type 'delete': [0]

--- Substep 4.3: Confirm your choices -----

This is the point of no return. You have selected to install MINIX 3
into region 0 of disk /dev/c0d0. Please confirm that you want
to use this selection to install MINIX 3.

Are you sure you want to continue? Please enter 'yes' or 'no': yes_
```

Digite "yes" e pressione enter.

# Instalando o Minix na máquina virtual

```
QEMU
Please select the region that you want to use for the MINIX 3 setup.
If you select an in-use region it will be overwritten by MINIX. The
following region were found on the selected disk:

    [0] Free space                (1535 MB)

Enter the region number to use or type 'delete': [0]

--- Substep 4.3: Confirm your choices -----

This is the point of no return. You have selected to install MINIX 3
into region 0 of disk /dev/c0d0. Please confirm that you want
to use this selection to install MINIX 3.

Are you sure you want to continue? Please enter 'yes' or 'no': yes

--- Step 5: Reinstall choice -----

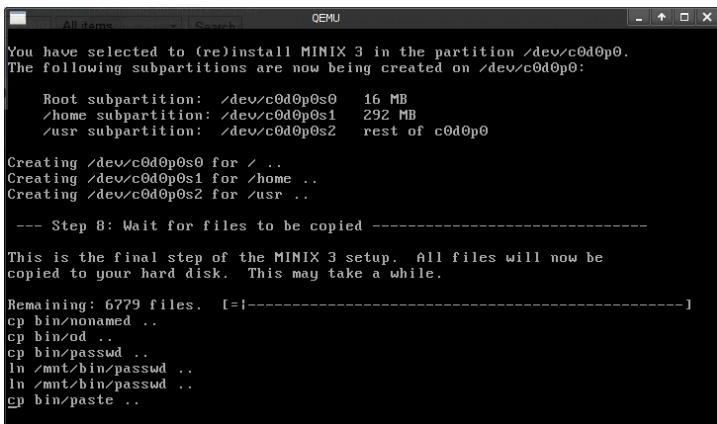
No old /home found. Doing full install.

--- Step 6: Select the size of /home -----

MINIX will take up 73 MB, without /home.
How big do you want your /home to be in MB (0-1461) ? [2921]
```

O tamanho dado para a pasta /home é suficiente, pois ela será muito pouco usada.

# Instalando o Minix na máquina virtual



```
QEMU
You have selected to (re)install MINIX 3 in the partition /dev/c0d0p0.
The following subpartitions are now being created on /dev/c0d0p0:

Root subpartition: /dev/c0d0p0s0 16 MB
/home subpartition: /dev/c0d0p0s1 292 MB
/usr subpartition: /dev/c0d0p0s2 rest of c0d0p0

Creating /dev/c0d0p0s0 for / ..
Creating /dev/c0d0p0s1 for /home ..
Creating /dev/c0d0p0s2 for /usr ..

--- Step 8: Wait for files to be copied -----

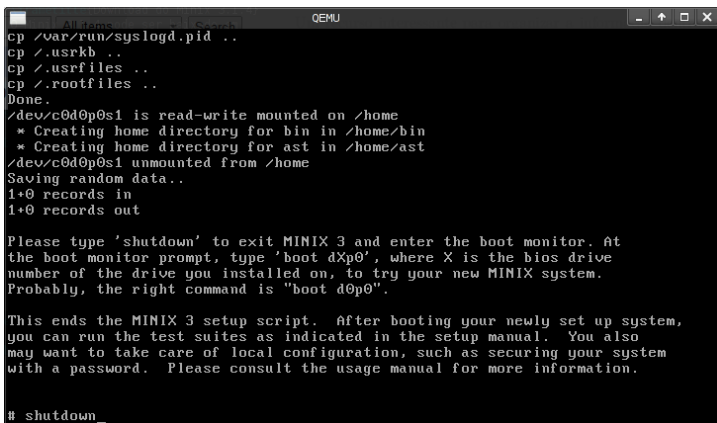
This is the final step of the MINIX 3 setup. All files will now be
copied to your hard disk. This may take a while.

Remaining: 6779 files. [!=|-----]
cp bin/nonamed ..
cp bin/od ..
cp bin/passwd ..
ln /mnt/bin/passwd ..
ln /mnt/bin/passwd ..
cp bin/paste ..
```

Aguarde enquanto os arquivos são copiados.



# Instalando o Minix na máquina virtual



```
QEMU
cp /var/run/syslogd.pid ..
cp /.usrkb ..
cp /.usrfiles ..
cp /.rootfiles ..
Done.
/dev/c0d0p0s1 is read-write mounted on /home
* Creating home directory for bin in /home/bin
* Creating home directory for ast in /home/ast
/dev/c0d0p0s1 unmounted from /home
Saving random data..
1+0 records in
1+0 records out

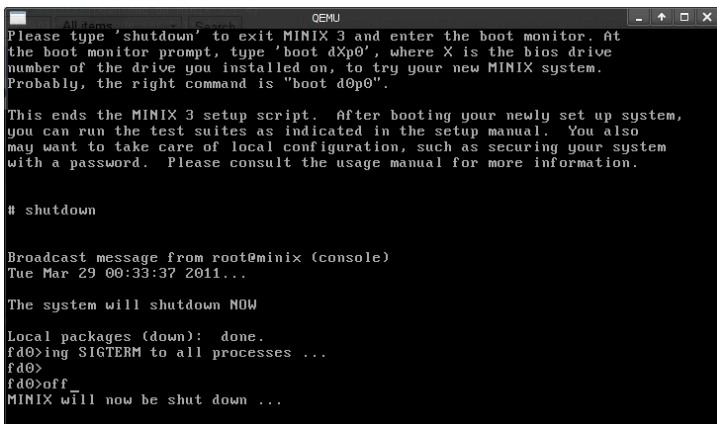
Please type 'shutdown' to exit MINIX 3 and enter the boot monitor. At
the boot monitor prompt, type 'boot dXp0', where X is the bios drive
number of the drive you installed on, to try your new MINIX system.
Probably, the right command is "boot d0p0".

This ends the MINIX 3 setup script. After booting your newly set up system,
you can run the test suites as indicated in the setup manual. You also
may want to take care of local configuration, such as securing your system
with a password. Please consult the usage manual for more information.

# shutdown_
```

Digite shutdown para desligar o Minix.

# Instalando o Minix na máquina virtual



```
QEMU
Please type 'shutdown' to exit MINIX 3 and enter the boot monitor. At
the boot monitor prompt, type 'boot dXp0', where X is the bios drive
number of the drive you installed on, to try your new MINIX system.
Probably, the right command is "boot d0p0".

This ends the MINIX 3 setup script. After booting your newly set up system,
you can run the test suites as indicated in the setup manual. You also
may want to take care of local configuration, such as securing your system
with a password. Please consult the usage manual for more information.

# shutdown

Broadcast message from root@minix (console)
Tue Mar 29 00:33:37 2011...

The system will shutdown NOW

Local packages (down): done.
fd0>ing SIGTERM to all processes ...
fd0>
fd0>off
MINIX will now be shut down ...
```

E por fim, off para desligar a máquina virtual.

# Executando o Minix pela primeira vez

Para executar o Qemu com o Minix já instalado o comando é:

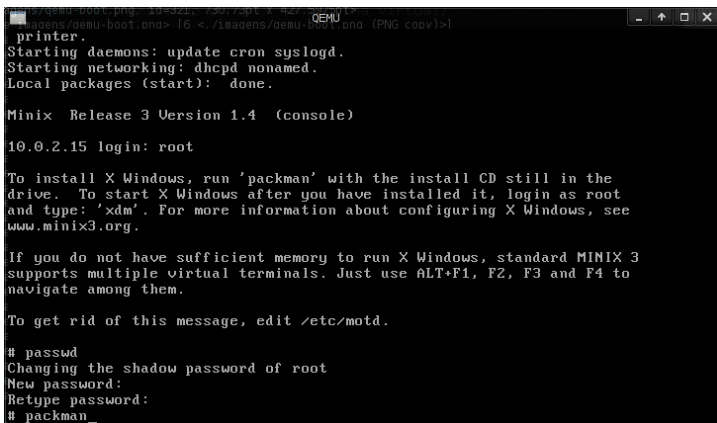
```
qemu -localtime -net user -redir tcp:22000::22 -net  
    nic,model=rtl8139 -m 256 -hda minix.img
```

## Sugestão:

Como antes, crie um arquivo chamado `qemu-boot` contendo o comando acima e dê permissão de executável. Assim iniciar a máquina virtual passa a ser tão simples como `./qemu-boot`.



# Instalando o SSH



```
is/qemu-boot.png: 10=321, 730, 73pt x #27...
hagens/qemu-boot.png [6 <./images/qemu-boot.png (PNG copy)>]
printer.
Starting daemons: update cron syslogd.
Starting networking: dhcpd nonamed.
Local packages (start): done.

Minix Release 3 Version 1.4 (console)

10.0.2.15 login: root

To install X Windows, run 'packman' with the install CD still in the
drive. To start X Windows after you have installed it, login as root
and type: 'xdm'. For more information about configuring X Windows, see
www.minix3.org.

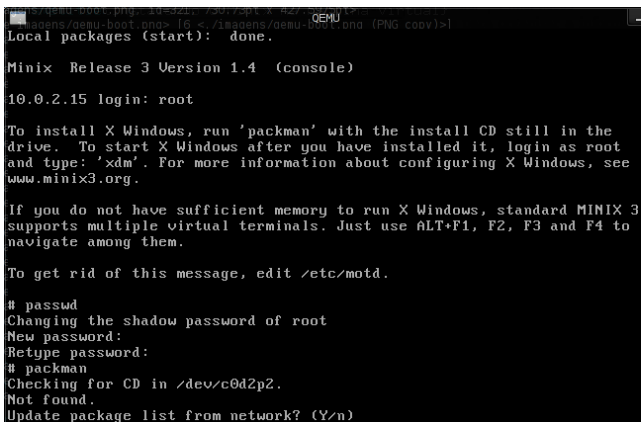
If you do not have sufficient memory to run X Windows, standard MINIX 3
supports multiple virtual terminals. Just use ALT+F1, F2, F3 and F4 to
navigate among them.

To get rid of this message, edit /etc/motd.

# passwd
Changing the shadow password of root
New password:
Retype password:
# packman_
```

Digite packman para abrir o gerenciador de pacotes do Minix.

# Instalando o SSH



```
is/qemu-boot.png 10=321 /30.73pt x #27
hagens/qemu-boot.png> [6 < ./images/qemu-boot.png (PNG copy)>]
Local packages (start): done.

Minix Release 3 Version 1.4 (console)

10.0.2.15 login: root

To install X Windows, run 'packman' with the install CD still in the
drive. To start X Windows after you have installed it, login as root
and type: 'xdm'. For more information about configuring X Windows, see
www.minix3.org.

If you do not have sufficient memory to run X Windows, standard MINIX 3
supports multiple virtual terminals. Just use ALT+F1, F2, F3 and F4 to
navigate among them.

To get rid of this message, edit /etc/motd.

# passwd
Changing the shadow password of root
New password:
Retype password:
# packman
Checking for CD in /dev/c0d2p2.
Not found.
Update package list from network? (Y/n) _
```

Digite "y" e enter para baixar a lista de pacotes disponíveis.

# Instalando o SSH

```
is/qemu-boot.png -w=321 -h=307 dpi x #27 100%
imacons/qemu-boot.png> [6 <./imacons/qemu-boot.png (PNG copy)>]

To install X Windows, run 'packman' with the install CD still in the
drive. To start X Windows after you have installed it, login as root
and type: 'xdm'. For more information about configuring X Windows, see
www.minix3.org.

If you do not have sufficient memory to run X Windows, standard MINIX 3
supports multiple virtual terminals. Just use ALT+F1, F2, F3 and F4 to
navigate among them.

To get rid of this message, edit /etc/motd.

# passwd
Changing the shadow password of root
New password:
Retype password:
# packman
Checking for CD in /dev/c0d2p2.
Not found.
Update package list from network? (Y/n) Y
Fetching package list from http://www.minix3.org/packages/i386/3.1.4/List.

Showing you a list of packages using more. Press q when
you want to leave the list.
Press RETURN to continue.._
```

Pressione enter para mostrar a lista de pacotes.

# Instalando o SSH

```

msdosfs-gemv-boot.png [6 < /msdosfs-gemv-boot.png (PNG copy)]
64 mtools-3.9.7      ms-dos filesystem compatability tools (68 kB)
65 nano-1.3.12       'compatible but enhanced' Pico clone (1168 kB)
66 nawk              New AWK (59 kB)
67 ncftp-3.1.9       NcFTP, an nice fullscreen ftp client (344 kB)
68 ncurses-5.5       new curses library (1216 kB)
69 neon-0.25.5       C library for webdav (120 kB)
70 nethack-3.4.3-2    Nethack, the famous dungeon exploration game (824 kB)
71 netpbm-10.26.30   toolkit for image manipulation and conversion (7768 kB)
72 nomarch-1.3       Unpacks .ARC and .ARK MS-DOS archives (37 kB)
73 nvi-1.79          A new vi implementation (208 kB)
74 openssh-4.3p2     openssh implementation of secure shell (3024 kB)
75 openssl-0.9.8a    library of security algorithms and protocols (1816 kB)
76 patch-2.5.4       GNU patch (52 kB)
77 pce-0.1.7         An IBM PC Emulator - Boots and runs most DOS applications!
(528 kB)
78 pdksh-5.2.14      public domain implementation of ksh (korn shell) (184 kB)
79 perl-5.8.7        perl interpreter (12384 kB)
80 php-5.2.1         PHP Hypertext PreProcessor 5.2.1 (2664 kB)
81 pine-4.64         Pine email and news system. (1688 kB)
82 pkg-config-0.20    pkg-config - package configuration management (152 kB)
83 PopTart-0.9.7     pop client (64 kB)
84 postgresql-8.4.0  Postgres RDBMS. (4304 kB)
85 psutils           postscript manipulation utilities (136 kB)
86 python-2.4.3      python interpreter (7680 kB)
standard-input, 65-87

```

Procure o pacote openssh na lista. No caso, é o número 74.



# Instalando o SSH

```

is/qemu-boot.png 10=321 730x300 x #27
adgens/qemu-boot.png [6 < ./adgens/qemu-1.0.0.png (PNG copy)]
QEMU
66 nawk New AWK (59 kB)
67 ncftp-3.1.9 NcFTP, an nice fullscreen ftp client (344 kB)
68 ncurses-5.5 new curses library (1216 kB)
69 neon-0.25.5 C library for webdav (120 kB)
70 nethack-3.4.3-2 Nethack, the famous dungeon exploration game (824 kB)
71 netpbm-10.26.30 toolkit for image manipulation and conversion (7768 kB)
72 nomarch-1.3 Unpacks .ARC and .ARX MS-DOS archives (37 kB)
73 nvi-1.79 A new vi implementation (208 kB)
74 openssh-4.3p2 openssh implementation of secure shell (3024 kB)
75 openssl-0.9.8a library of security algorithms and protocols (1816 kB)
76 patch-2.5.4 GNU patch (52 kB)
77 pce-0.1.7 An IBM PC Emulator - Boots and runs most DOS applications!
(528 kB)
78 pdksh-5.2.14 public domain implementation of ksh (korn shell) (184 kB)
79 perl-5.8.7 perl interpreter (12384 kB)
80 php-5.2.1 PHP Hypertext PreProcessor 5.2.1 (2664 kB)
81 pine-4.64 Pine email and news system. (1688 kB)
82 pkg-config-0.20 pkg-config - package configuration management (152 kB)
83 PopTart-0.9.7 pop client (64 kB)
84 postgresql-8.4.0 Postgres RDBMS. (4304 kB)
85 psutils postscript manipulation utilities (136 kB)
86 python-2.4.3 python interpreter (7680 kB)
87 rcs-5.7 RCS revision control system utilities (176 kB)
Format examples: '3', '3,6', '3-9', '3-9,11-15', 'all'
Package(s) to install (RETURN or q to exit)? 74_

```

Pressione q para sair da lista e digite o número do pacote, seguido de enter.

# Instalando o SSH

```
is/qemu-boot.png 10=321 /30.7pt x #27
agents/qemu-boot.png [6 < /30.7pt x #27] (PNG conv)>]
75 openssl-0.9.8a library of security algorithms and protocols (1816 kB)
76 patch-2.5.4 GNU patch (52 kB)
77 pce-0.1.7 An IBM PC Emulator - Boots and runs most DOS applications!
(528 kB)
78 pdksh-5.2.14 public domain implementation of ksh (korn shell) (184 kB)
79 perl-5.8.7 perl interpreter (12384 kB)
80 php-5.2.1 PHP Hypertext PreProcessor 5.2.1 (2664 kB)
81 pine-4.64 Pine email and news system. (1688 kB)
82 pkg-config-0.20 pkg-config - package configuration management (152 kB)
83 PopTart-0.9.7 pop client (64 kB)
84 postgresql-8.4.0 Postgres RDBMS. (4304 kB)
85 psutils postscript manipulation utilities (136 kB)
86 python-2.4.3 python interpreter (7680 kB)
87 rcs-5.7 RCS revision control system utilities (176 kB)
Format examples: '3', '3,6', '3-9', '3-9,11-15', 'all'
Package(s) to install (RETURN or q to exit)? 74
Get source(s) too? (y/N) N

Retrieving 74 (openssh-4.3p2) from primary location into /usr/tmp/packages ..
Retrieved ok. Installing ..
Installed ok.

Showing you a list of packages using more. Press q when
you want to leave the list.
Press RETURN to continue.._
```

Digite N para não baixar as fontes do pacote, espere a instalação ser concluída e pressione enter mais uma vez.

# Instalando o SSH

```
is/qemu-boot.png 10=321 /30.73pt x #27
#adens/qemu-boot.png> [6 < /isadens/qemu-1.11.0.png (PNG copy)>]
QEMU
1 apache-1.3.37 The Apache HTTP Server v1.3.37 (4056 kB)
2 apr-0.9.12 apache portable runtime library (gcc format) (168 kB)
3 apr-util-0.9.12 apache portable runtime utils (128 kB)
4 ascii-3.8 Interactive ASCII name and synonym chart (24 kB)
5 atk-1.9.0 The ATK library. (184 kB)
6 autoconf-2.59 Autoconf set of automatic configuration tools (416 kB)
7 automake-1.9 gnu automake (256 kB)
8 avra-0.7 Assembler for Atmel AVR microcontrollers (49 kB)
9 bash-3.0 GNU bourne-again shell (376 kB)
10 bc-1.06 Arbitrary-precision calculator (70 kB)
11 bchunk-1.2.0 CD image format conversion from bin/cue to iso/cdr (19 kB)
12 bcrypt-1.1 Cross platform file encryption utility (67 kB)
13 binutils-2.16.1 A collection of GNU binary tools (7512 kB)
14 bison-2.1 Parser generator (requires gnu m4 in m4 package) (1072 kB)
15 catdoc-0.94.2 view various file types such as ms word in text (200 kB)
16 CSSC-1.0.1 SCCS Version Control Software Clone (3112 kB)
17 cvs-1.11.21 Concurrent versioning system (320 kB)
18 db-4.4.20 Berkeley DB - Open source developer database (13584 kB)
19 diffutils-2.8.1 GNU diff and friends (136 kB)
20 dungeon-2.7.1 Text adventure dungeon exploration game (168 kB)
21 ede-1.1 Equinox Desktop Environment 1.1 (needs EFLTK) (19352 kB)
22 efltk-2.0.6 EFLTK - Extended Fast Light Toolkit 2.0.6 (3536 kB)
23 emacs-21.4 The EMACS editor (12752 kB)
Format examples: '3', '3,6', '3-9', '3-9,11-15', 'all'
Package(s) to install (RETURN or q to exit)? q_
```

Pressione q mais uma vez para sair da lista, digite q e enter para sair do packman.

# Instalando o SSH

```
is/qemu-boot.png 10=321 /30.73pt x #27
hagens/qemu-boot.png [6 < /isagens/qemu-boot.png (PNG copy)]>
2 apr-0.9.12      apache portable runtime library (gcc format) (168 kB)
3 apr-util-0.9.12 apache portable runtime utils (128 kB)
4 ascii-3.8       Interactive ASCII name and synonym chart (24 kB)
5 atk-1.9.0       The ATK library. (184 kB)
6 autoconf-2.59   Autoconf set of automatic configuration tools (416 kB)
7 automake-1.9    gnu automake (256 kB)
8 avra-0.7        Assembler for Atmel AVR microcontrollers (49 kB)
9 bash-3.0        GNU bourne-again shell (376 kB)
10 bc-1.06        Arbitrary-precision calculator (70 kB)
11 bchunk-1.2.0    CD image format conversion from bin/cue to iso/cdr (19 kB)
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14 bison-2.1       Parser generator (requires gnu m4 in m4 package) (1072 kB)
15 catdoc-0.94.2   view various file types such as ms word in text (200 kB)
16 CSSC-1.0.1      SCCS Version Control Software Clone (3112 kB)
17 cvs-1.11.21     Concurrent versioning system (320 kB)
18 db-4.4.20       Berkeley DB - Open source developer database (13584 kB)
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21 ede-1.1         Equinox Desktop Environment 1.1 (needs EFLTK) (19352 kB)
22 efltk-2.0.6     EFLTK - Extended Fast Light Toolkit 2.0.6 (3536 kB)
23 emacs-21.4      The EMACS editor (12752 kB)
Format examples: '3', '3,6', '3-9', '3-9,11-15', 'all'
Package(s) to install (RETURN or q to exit)? q
# reboot_
```

Digite reboot para rebotar o Minix.

# Instalando o SSH

```
is/qemu-boot.png -t=321.../30...pt x #27...
is/qemu-boot.png [6 < /is/qemu-boot.png (PNG copy)]
0b090000 0b120000 360000 11544 486900 131072 vm
0bac0000 0bac0000 7024 2460 1356 65536 init

MINIX 3.1.4. (4817)
Copyright 2009, Vrije Universiteit, Amsterdam, The Netherlands
MINIX is open source software, see http://www.minix3.org
Root device name is /dev/c0d0p0s0
Multiuser startup in progress .... is.
Tue Mar 29 01:24:31 GMT 2011
/dev/c0d0p0s2 is read-write mounted on /usr
/dev/c0d0p0s1 is read-write mounted on /home
Starting services: random rtl8139add_forward_ipc: unable to find 'inet'
add_forward_ipc: unable to find 'amddev'
inetrtl8139#0: Realtek RTL8139 (10ec/8139) at 0.3.0
rl_reset_hw: (before reset) port = 0xc100, RL_CR = 0xd
rl_reset_hw: (after reset) port = 0xc100, RL_CR = 0x1
rtl8139#0: model RTL8139C+
rtl8139#0: link up at 100 Mbps, half duplex
printer.
Starting daemons: update cron syslogd.
Starting networking: dhcpcd nonamed.
Local packages (start): sshd Generating SSH1 RSA host key: Ok
Generating SSH2 RSA host key: _
```

Note o serviço de ssh iniciando durante o boot.

# Utilizando o sshfs

Podemos agora acessar os arquivos do Minix por sshfs, com o comando

```
sshfs -p22000 root@localhost:/ ./minixfs/
```

Para desmontar:

```
fusermount -u ./minixfs/
```

## Sugestão:

Mais uma vez, pode-se criar um arquivo executável `mount-minix` e um `unmount-minix` para agilizar o processo.

# Utilizando o sshfs

```
tarcisioe@r2d2:~/install_qemu/minix
tarcisioe:r2d2 ~/install_qemu/minix $ ls minixfs/
tarcisioe:r2d2 ~/install_qemu/minix $ sshfs -p22000 root@localhost:/ ./minixfs/
root@localhost's password:
tarcisioe:r2d2 ~/install_qemu/minix $ ls minixfs/
bin boot dev etc lib root sbin var
tarcisioe:r2d2 ~/install_qemu/minix $
```

Com o sshfs é possível mexer nos arquivos do Minix como se eles estivessem no seu computador.

# Compilação do Kernel

Para compilar o kernel e os serviços (Servidores):

```
cd /usr/src/tools  
make hdbboot
```

## Atenção!

Os comandos de compilação do Minix instalam arquivos em locais como `/usr` e `/usr/lib`. Esses comandos devem ser executados pelo Qemu, e não com o Minix montado pelo sshfs. Provavelmente você não executará o comando como root, mas se executar, seu sistema será destruído :).



# Compilação das bibliotecas

Para compilar as bibliotecas:

```
cd /usr/src/tools  
make libraries
```

Para limpar os arquivos objeto e garantir que o make recompile tudo:

```
cd /usr/src/tools  
make fresh
```

E-mail: `tarcisio.crocomo@inf.ufsc.br`