MkLinux - Read Me First

This is a work in progress. Things may have changed since these Release Notes were created. Be sure to visit our Web site, www.mklinux.apple.com, for any late breaking news, changes, or updates.

Contacting Apple

Should you have any comments, issues, or bugs to report, please send us mail at: bugs@mklinux.apple.com.

Configuration, Drive Setup and Partitioning

We recommend you use a dedicated hard drive for installing MkLinux - for ease of installation and to avoid any potential loss of data, don't share the drive you use for your primary Macintosh filesystem.
You may use Apple HD SC Setup or any 3rd-party disk partitioner that can create "A/UX" type partitions. Your target drive may be any SCSI ID. We recommend at least 400 MB of available disk space, and 16 MB RAM before you install MkLinux.

X11R6 distribution

The X11R6 distribution is not automatically installed. To install the X Window system, follow the instructions in the file "X11 Binary Installation" in the folder "MkLinuxFiles:X11R6.bin".

Supported Systems

This version of MkLinux has been booted and run on the following types of systems:

Power Macintosh 6100
Power Macintosh 7100/66, 7100/80
Power Macintosh 8100/80, 8100/100, 8100/110
PowerComputing 100 & 120

Power PC 603/604 are not supported

Known problems

Video

• Only the Power Macintosh on-board video and HPV card are currently supported; nubus video cards will not work in this release.
• The video driver does not yet recognize the Apple monitor as a "linux" or "console" terminal type. The following workarounds are recommended:

- the linux console is being temporarily considered to be a "vt100" terminal. The /etc/termcap file has been modified accordningly.
- stty -onlcr is set for console (vt100) sessions; stty onlcr is set for telnet (vt220) sessions. This has been set in /etc/profile and /etc/csh.login.

– *Note:* You must set the appropriate number of rows for your terminal.
Set this in your .profile (.login) or the system /etc/profile (/etc/csh.login).
For example, for a 640x480 screen (Apple 13-inch), use:

```
stty rows 30
export LINES=30  # csh: setenv LINES 30
```

• "Millions Of Colors" (aka 32bpp) is not supported. (yet)
•"Thousands of Colors" (aka 16bpp) is supported. X11 does run in this mode, but has problems with adjusting the color map.
•Video scrolling is slow. If you are using motherboard video, you might want to set the monitor into Black&White mode (aka 1bpp) for faster scrolling.

PCI Bus
PCI bus is currently unsupported.

SCSI devices
• For systems that have two SCSI busses, such as Power Macintosh 8100/100's, the SCSI ID maps are logically merged into one. Devices sharing the same id but on seperate busses are not supported. Only the external bus ID will be accessible in such a case. Shadow drives are not supported
• Only SCSI hard disks and CDROMs are supported at the moment. "Personal" storage devices such as Iomega's Zip drive, and Syquest's EZStorage have not been tested.
• The disk devices on the SCSI bus correspond to MkLinux device files beginning with the letters "sa" in the /dev directory. Each disk on the bus is designated by letter (a-g) to correspond to its SCSI ID number (0-6). Each partition on the device is designated by number. For example, the MkLinux device file /dev/sde6 corresponds to SCSI disk ID 4, partition 6. (Note that partition counting begins with 1 and may differ from the partition number used by a Macintosh utility; see "Filesystems and Disk Partitions").

ADB devices
Only the standard Apple mouse and keyboards are specifically supported. Other ADB devices, such as trackballs, may not work. If you have one of these devices connected, and your cursor does not track under the X11 Window system, disconnect the device in favor of a simple mouse or keyboard.

Filesystems and Disk Partitions
• The mke2fs command from the LinuxPPC orginization (www.linuxppc.org) has been modified to support a 4K default block size instead of 1K. Currently there are problems using 4K block-size filesystems under MkLinux. A 1K block size is highly recommended.

• Only 8 disk partitions of any type (HFS, MkLinux, Driver partitions,etc) are supported. Partitions numbered 9 and above cannot be used by MkLinux.
As the Macintosh reserves several partitions for itself, this realistically limits you to 4 or perhaps 5 "user" partitions.
• MkLinux counts partition numbers beginning at `1'. Some Macinstosh partitioning utilities, such as Apple HD SC Setup, begin counting at 0. (Thus "Partition 3" as shown by the Apple HD SC Setup Details command is accessed as partition # 4 under

MkLinux).

Floppy disk access
There is no floppy disk access support available at this time.

HFS volume access
Several commands are included which allow and enhance accessing Macintosh HFS volumes (Macintosh file systems). A single Macintosh volume can be "mounted", allowing access to files on that volume. Any Macintosh volume on your SCSI chain can be accessed in this manner. The following commands are available:

- hmount - "mounts" an HFS filesystem, until another HFS filesystem is mounted. For example:

  hmount /dev/sda4

  will mount the volume in the 4th partition on the disk with SCSI ID 1
- hdir - lists a directory on a mounted HFS volume
- hcd - "change directory" command. For example:

  hcd "MyHardDisk:Apps:"

  will set the current directory to the Apps folder on the Macintosh volume "MyHardDisk".
- hcopy - copies files from a named Macintosh folder to a named MkLinux directory. Several options are available to specify how files are to be treated on copying. For example:

  hcopy -t "MyHardDisk:Readme" /tmp

  copies the file Readme from the top level of the Macintosh volume "MyHardDisk" to /tmp, specifying the file as text (CR-LF translation is done; the resulting file acquires the suffix: .txt)

Swap space
- If an application asks for more swap space than is currently available, the kernel will try to oblige. You may run out of Swap space if this occurs. If the nonexistent pages get used, you will crash.
- An error message regarding "Paging Space over-committed" is generally benign.
- The Fresco package (part of the X11R6 package) doesn't build, and will crash if you try. It is most likely running out of swap space. Fresco is considered a "Work in Progress" and is not supported at this time.
- A maximum of 64MB per swap partition is supported. (This is compability with Linux 1.2.13.)

Kernel, tasks, scheduling
The ability to change a task's priorities is not implemented. All tasks share the same priority level and will be adjusted according to MACH scheduling policies. Commands like 'nice' are ineffective in changing a processes priority.

Utilities
- Note that the utilities are rev 1.3.54; the Linux kernel is rev 1.2.13. Your mileage may

vary.
• The `hostname' command does not modify /etc/sysconfig/network
(where the hostname is stored on disk).
• The X Window system can take a few minutes to launch ; please be patient.
• Do not run the `screenrestore' command directly from with the X Window system. This command is used by X to clean up the screen when exiting.

Compiling SRPMs

• The libc package needs special attention. Simply doing a complete rebuild of the package will result in the removal of the symbolic links for /usr/include/linux and /usr/include/asm. To work around
this problem extract the source package
rpm --install ibc-5.2.18-1.src.rpm
and modify the SPECS script, removing the following two commands starting at line 53:
ln -s /usr/include/linux .
ln -s /usr/include/asm .

You may then rebuild the libc package using
rpm -ba libc-5.2.18.spec.

• The gcc-2.7.2-2 package will generate the wrong symlink for /lib/cpp during installation. The correct symlink is
ln -s /usr/lib/gcc-lib/ppc-linux/2.7.2/cpp /lib/cpp

For More Information..

visit these WEB sites:
To learn more about **MkLinux**, visit Apple's WEB site: www.mklinux.apple.com
To learn more about **MACH** and other **OSF** projects, visit their web site: www.osf.org
To learn more about the **Linux PPC Organization**, visit their web site: www.linuxppc.org
To learn more about **RPM** and other **Red Hat** projects, vist their web site: www.redhat.com
To learn more about **NetBSD** and **MacBSD** for 68K based Macintoshes: wwww.netbsd.org

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the Power PC platforms.

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first attempt to bring up MACH.

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