

基于 Linux 的操作系统研究

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操作系统组成模块

- ▶ 启动模块
- ▶ 进程模块
- ▶ 内存模块
- ▶ 外围功能模块

开发环境

► 宿主 OS

<i>debian</i>	Linux debian v6.1.0.7-amd64
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开发环境

- ▶ 宿主 OS
- ▶ 虚拟机

<i>debian</i>	Linux debian v6.1.0.7-amd64
<i>bochs</i>	Bochs v2.6.9

开发环境

- ▶ 宿主 OS
- ▶ 虚拟机
- ▶ 编译器

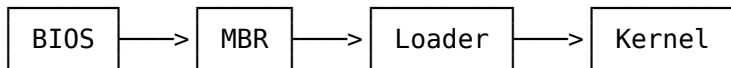
<i>debian</i>	Linux debian v6.1.0.7-amd64
<i>bochs</i>	Bochs v2.6.9
nasm	Nasm v2.16.01
gcc	Gcc v12.2.0

开发环境

- ▶ 宿主 OS
- ▶ 虚拟机
- ▶ 编译器
- ▶ 编辑器

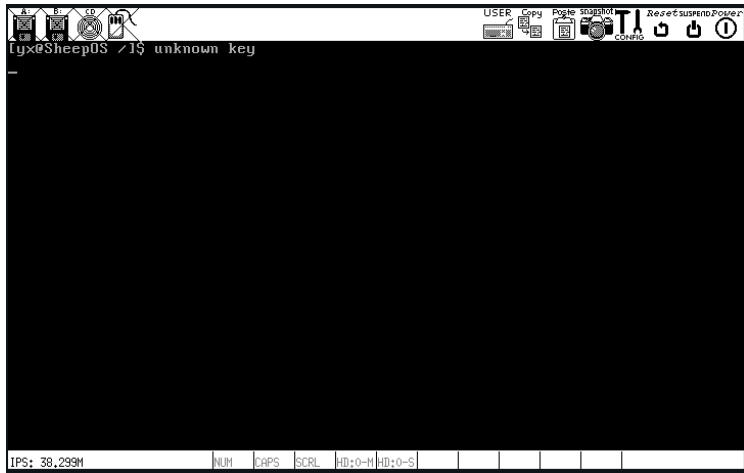
<i>debian</i>	Linux debian v6.1.0.7-amd64
<i>bochs</i>	Bochs v2.6.9
nasm	Nasm v2.16.01
gcc	Gcc v12.2.0
<i>Emacs</i>	GNU Emacs v28.2
<i>Vim</i>	GNU Vim v0.7.2

启动过程



shell

- ▶ 清屏 **Ctrl** + **L** ;
- ▶ 清除输入 **Ctrl** + **U** ;



查看目录——ls



The screenshot shows a terminal window with a black background and white text. The prompt is `lyx@SheepOS /l$`. The user enters `ls`, and the output is:

```
. .. test
```

The user then enters `ls -l`, and the output is:

```
total: 72
d  0 72 .
d  0 72 ..
d  1 72 test
```

The user enters `ls -h`, and the output is:

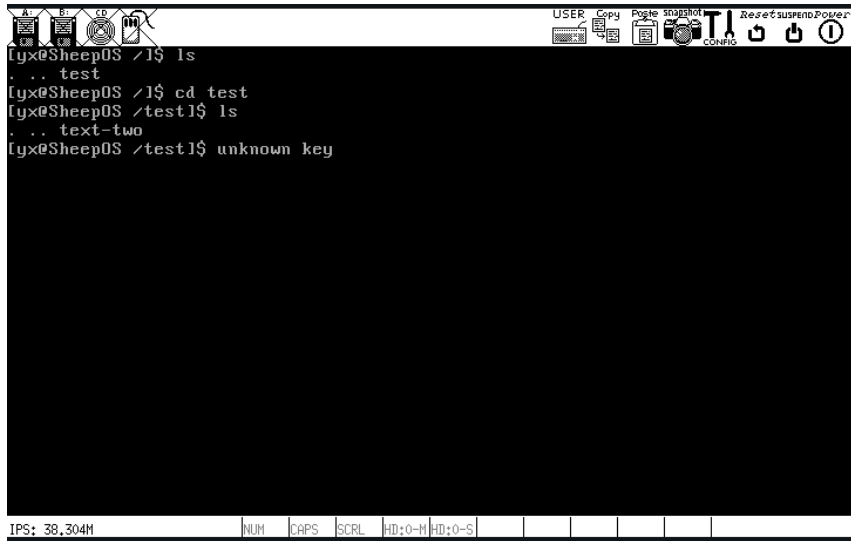
```
usage: -l list all information about the file.
-h for help
list all files in the current directory if no option
```

The user then enters `unknown key`, and the output is:

```
unknown key
```

The terminal window has a top bar with icons for A:, B:, CD, and a power button. On the right side of the top bar, there are icons for USER, Copy, Paste, Snapshot, CONFIG, and Reset/Suspend/Power. The bottom bar shows the IP address `IPS: 38.501M` and a row of status indicators: NUM, CAPS, SCRL, HD:0-M, HD:0-S, and several empty boxes.

跳转到指定目录——cd



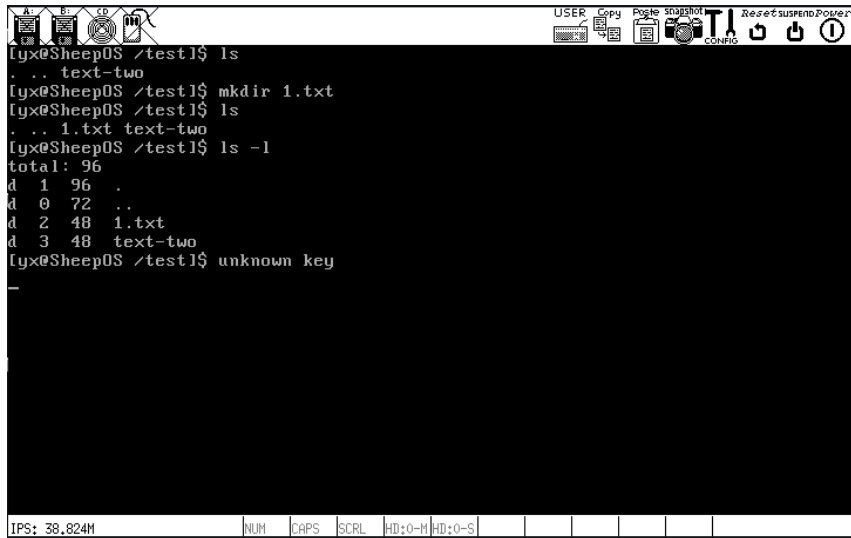
The screenshot shows a terminal window titled 'SheepOS' with a toolbar at the top containing icons for USER, Copy, Paste, Snapshot, CONFIG, and power management (Reset, Suspend, Power). The terminal text is as follows:

```
[yx@SheepOS /1$ ls  
.. test  
[yx@SheepOS /1$ cd test  
[yx@SheepOS /test1$ ls  
.. text-two  
[yx@SheepOS /test1$ unknown key
```

At the bottom of the window, there is a status bar with the following information:

IPS: 38,304M	NUM	CAPS	SCRL	HD:0-M	HD:0-S						
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创建文件——mkdir



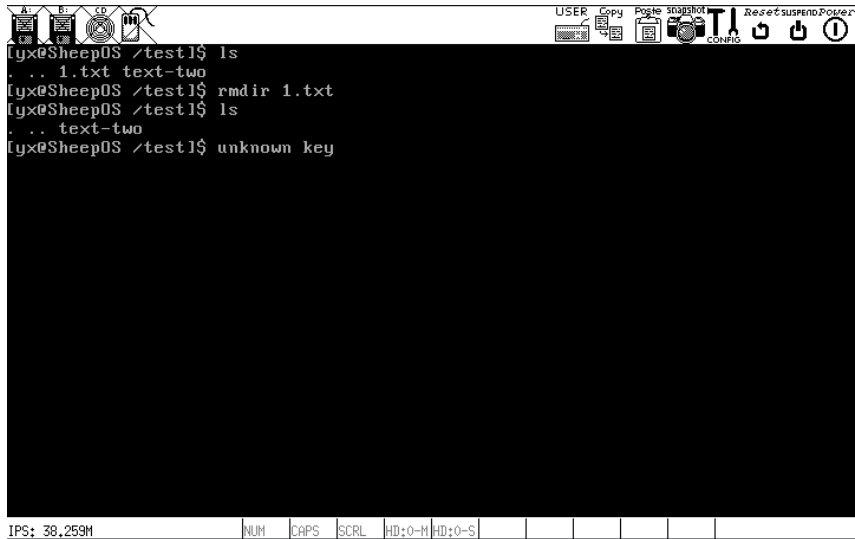
The screenshot shows a terminal window titled "A:" with icons for A:, B:, CD, and a mouse cursor. The terminal output is as follows:

```
[yx@SheepOS /test]$ ls
. .. text-two
[yx@SheepOS /test]$ mkdir 1.txt
[yx@SheepOS /test]$ ls
. .. 1.txt text-two
[yx@SheepOS /test]$ ls -l
total: 96
d 1 96 .
d 0 72 ..
d 2 48 1.txt
d 3 48 text-two
[yx@SheepOS /test]$ unknown key
-
```

The terminal window has a toolbar at the top with icons for USER, Copy, Paste, Snapshot, CONFIG, Reset, SUSPEND, and Power. At the bottom, there is a status bar with the following information:

IPS: 38.824M	NUM	CAPS	SCRL	HD:0-M	HD:0-S						
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删除文件——rmmdir



The screenshot shows a terminal window with a black background and white text. The top of the window features a toolbar with icons for A: and B: drives, a CD-ROM, a power button, and various system functions like USER, Copy, Paste, snapshot, CONFIG, Reset, suspend, and Power. The terminal text shows a user at the SheepOS prompt in the /test directory, listing files (1.txt, text-two), removing the 1.txt directory, listing files again (text-two), and then entering an unknown key.

```
[yx@SheepOS /test]$ ls
. . 1.txt text-two
[yx@SheepOS /test]$ rmdir 1.txt
[yx@SheepOS /test]$ ls
. . text-two
[yx@SheepOS /test]$ unknown key
```

At the bottom of the terminal window, there is a status bar with the following information: IPS: 38.259M, NUM, CAPS, SCRL, HD:0-M, HD:0-S, and several empty boxes.