



- ■本章学习目标
 - > 使用kudzu重新配置硬件
 - ▶配置模块
 - > 基本磁盘管理

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配置硬件

- 计算机添加硬件之后,会有系统工具来自动检测并配置硬件。如果硬件没有备正确安装, 可以使用模块工具来为硬件配置整齐的模块,以便使硬件正常工作。
- ■注意:安装前,收集好硬件相关信息。



kudzu

- > 检查连接到计算机的硬件
- > 发现的新硬件与保存在/etc/sysconfig/hwconf文件中的硬件信息数据库进行 比较。
- > 根据检测到的新硬件或者移出的硬件,提示修改系统配置。
- ▶用法:
 - 重新启动计算机
 - kudzu

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Ismod 列出已加载的模块

日子

• 例如

用法:	ISMO

		root@	RHEL5:~	. D ×
文件(E) 编辑(E) 3	查看似 終端(1) 标签	B) 帮!	加田	
[root@RHEL5 ']# 1smod			-
Modu1e	Si	ze l	Jsed by	
autofs4	237	49 2	2	
hidp	231	05 2	2	=
12cap	295	05 5	hidp	
bluetooth	539	25 2	hidp,12cap	
sunrpc	1429	73 1		
ip_conntrack	_netbios_ns	697	77 0	
ipt_REJECT	95	37 1		
xt_state	62	09 2	2	
ip_conntrack	531	53 2	2 ip_conntrack_netbios_ns,xt_sta	te
nfnetlink	107	13 1	ip_conntrack	
xt_tcpudp	71	05 4	la e	
iptable_filte	er 71	05 1	l .	
ip_tables	170	29 1	iptable_filter	
x_tables	173	49 4	ipt_REJECT,xt_state,xt_tcpudp,	ip_



root@RHEL5:~



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- modinfo 查看模块信息
 - >用法: modinfo 模块名

/ ///////////////////////////////////	iioaiiiio	イスク
• 例如		
● レリメH	CONTRACTOR OF THE PARTY OF THE PARTY.	

	1001911111101	شالسالسا
文件(E) 编辑(E) 查得	看(V) 終端(T) 标签(B) 帮助(H)	
[root@RHEL5 ~] filename:]# modinfo bluetooth /lib/modules/2.6.18-8.e15xen/kerne1/net/1	oluetooth
/bluetooth.ko		
alias:	net-pf-31	
license:	GPL	
version:	2.10	
description:	Bluetooth Core ver 2.10	
author:	Maxim Krasnyansky <maxk@qualcomm.com>, Ma</maxk@qualcomm.com>	arcel Hol
tmann <marce10< td=""><td>Dho1tmann.org></td><td></td></marce10<>	Dho1tmann.org>	
srcversion:	1E220576B92376D5041FF08	
depends:		=
vermagic:	2.6.18-8.e15xen SMP mod_unload 686 REGPA	RM 4KSTAC
KS gcc-4.1		





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- modprobe 加载模块
 - >用法: modprobe 模块名



- rmmod 移出模块
 - >用法: rmmod 模块名
 - 例如

 root@RHEL5:~

 文件(F) 编辑(E) 查看(V) 終端(T) 标签(B) 帮助(H)

 [root@RHEL5 ~]# rmmod bonding
 [root@RHEL5 ~]# 1smod | grep bonding

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■ 查看硬盘分区表

▶ fdisk -I

			root@RH	IEL5:~		
文件(F) 编辑(E) 查看(√)	终端(T) 标签(B) 寿	帮助(出)			
[root@RHE	L5 ~]# f	disk -1				
Disk /dev/	/sda: 16	.1 GB, 16106	127360 byt	es		
		tors/track,				
Units = cy	ylinders	of 16065 *	512 = 8225	280 bytes		
Device	Boot	Start	End	B1ocks	Ιd	System
dev/sdal	•	1	16	128488+	83	Linux
/dev/sda2		17	1673	13309852+	83	Linux
/dev/sda3		1674	1804	1052257+	82	Linux swap / Solaris

Disk /dev/sdb: 8589 MB, 8589934592 bytes 255 heads, 63 sectors/track, 1044 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes

Disk /dev/sdb doesn't contain a valid partition table [root@RHEL5 ~]#



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- ■分区开始
 - >fdisk 未分区的硬盘设备名

root@RHEL5:~ 文件① 编辑② 查看② 终端① 标签图 帮助① [root@RHEL5 ~]# fdisk /dev/sdb Device contains neither a valid DOS partition table, nor Sun, SGI or OSF disk1 abel Building a new DOS disklabel. Changes will remain in memory only, until you decide to write them. After that, of course, the previous content won't be recoverable. The number of cylinders for this disk is set to 1044. There is nothing wrong with that, but this is larger than 1024, and could in certain setups cause problems with: 1) software that runs at boot time (e.g., old versions of LILO)

Warning: invalid flag 0x0000 of partition table 4 will be corrected by w(rite)

2) booting and partitioning software from other OSs

(e.g., DOS FDISK, OS/2 FDISK)

Command (m for help):



磁盘管理——磁盘分区7-3

■ 建立主分区

```
Command (m for help): n
Command action
      extended
     primary partition (1-4)
Partition number (1-4): 1
First cylinder (1-1044, default 1):
Using default value 1
Last cylinder or +size or +sizeM or +sizeK (1-1044, default 1044): +100m
Command (m for help): p
Disk /dev/sdb: 8589 MB, 8589934592 bytes
255 heads, 63 sectors/track, 1044 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
   Device Boot
                    Start
                                  End
                                           Blocks
                                                        System
                                                    Id
/dev/sdb1
                                   13
                                           104391
                                                    83 Linux
Command (m for help):
```





磁盘管理——磁盘分区7-4

Command (m for help):

■ 建立扩展分区

```
Command (m for help): n
Command action
       extended
       primary partition (1-4)
Partition number (1-4): 2
First cylinder (14-1044, default 14):
Using default value 14
Last cylinder or +size or +sizeM or +sizeK (14-1044, default 1044):
Using default value 1044
Command (m for help): p
Disk /dev/sdb: 8589 MB, 8589934592 bytes
255 heads, 63 sectors/track, 1044 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
   Device Boot
                    Start
                                  End
                                           Blocks
                                                    Id System
/dev/sdb1
                                   13
                                                    83 Linux
                                           104391
/dev/sdb2
                       14
                                 1044
                                          8281507+
                                                        Extended
```







Command (m for help):

■建立逻辑分区

```
Command (m for help): n
Command action
      logical (5 or over)
      primary partition (1-4)
1
First cylinder (14-1044, default 14):
Using default value 14
Last cylinder or +size or +sizeM or +sizeK (14-1044, default 1044): +500m
Command (m for help): p
Disk /dev/sdb: 8589 MB, 8589934592 bytes
255 heads, 63 sectors/track, 1044 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
   Device Boot
                    Start
                                  End
                                           Blocks
                                                    Id System
/dev/sdb1
                                   13
                                           104391
                                                    83 Linux
/dev/sdb2
                                          8281507+ 5 Extended
                       14
                                 1044
/dev/sdb5
                       14
                                   75
                                           497983+ 83 Linux
```





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■删除一个分区

Device	Boot	Start	End	Blocks	Id	System
/dev/sdb1		1	13	104391	83	Linux
/dev/sdb2		14	1044	8281507+	5	Extended
/dev/sdb5		14	75	497983+	83	Linux
/dev/sdb6		76	100	200781	83	Linux

Command (m for help): d Partition number (1-6): 6

Command (m for help): p

Disk /dev/sdb: 8589 MB, 8589934592 bytes 255 heads, 63 sectors/track, 1044 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes

Device Bo	ot Start	End	B1ocks	Ιd	System
/dev/sdb1	1	13	104391	83	Linux
/dev/sdb2	14	1044	8281507+	5	Extended
/dev/sdb5	14	75	497983+	83	Linux





磁盘管理——磁盘分区7-7

Command (m for help): p

■ 保存硬盘分区表

```
Disk /dev/sdb: 8589 MB, 8589934592 bytes
255 heads, 63 sectors/track, 1044 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Ιđ	System
/dev/sdb1		1	13	104391	83	Linux
/dev/sdb2		14	1044	8281507+	5	Extended
/dev/sdb5		14	75	497983+	83	Linux

Command (m for help): w
The partition table has been altered!

Calling ioct1() to re-read partition table. Syncing disks.
[root@RHEL5 ~]#

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磁盘管理——磁盘分区格式化

■格式化成ext3类型

▶ mkfs.ext3 磁盘分区

[root@RHEL5 ~]# mkfs.ext3 /dev/sdb1
mke2fs 1.39 (29-May-2006)
Filesystem labe1=
OS type: Linux
Block size=1024 (log=0)
Fragment size=1024 (log=0)
26104 inodes, 104388 blocks
5219 blocks (5.00%) reserved for the super user
First data block=1
Maximum filesystem blocks=67371008
13 block groups
8192 blocks per group, 8192 fragments per group
2008 inodes per group
Superblock backups stored on blocks:
8193, 24577, 40961, 57345, 73729

Writing inode tables: done Creating journal (4096 blocks): done Writing superblocks and filesystem accounting information: done

This filesystem will be automatically checked every 37 mounts or 180 days, whichever comes first. Use tune2fs -c or -i to override.

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磁盘管理——磁盘分区格式化

- ■格式化vfat格式
 - > mkfs.vfat 磁盘分区

[root@RHEL5 ~]# mkfs.vfat /dev/sdb1 mkfs.vfat 2.11 (12 Mar 2005)









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文件系统的挂载与卸载——手动

- 挂载
 - 磁盘分区(包含文件系统) 挂载点(目录名) > mount

```
[root@RHEL5 ~]# mount /dev/sdb1 /mu1u1/
[root@RHEL5 ~]# df
                                           可用 已用% 挂载点
文件系统
                      1K-块
                                   已用
/dev/sda2
                     12892796
                                3828844
                                         8398460 32% /
                                                 10% /boot
/dev/sdal
                       124427
                                  11284
                                          106719
                                                 0% /dev/shm
tmpfs
                       237656
                                          237656
                                                   0% /mu1u1
/dev/sdb1
                       104170
                                          104170
                                     0
```

- ■卸载
 - > umount 挂载点(目录名)

```
[root@RHEL5 ~]# umount /mu1u1/
[root@RHEL5 ~]# df
                                            可用 已用% 挂载点
文件系统
                      1K-块
                                   已用
                                                  32% /
/dev/sda2
                     12892796
                                3828844
                                         8398460
/dev/sdal
                       124427
                                  11284
                                          106719
                                                  10% /boot
tmpfs
                       237656
                                          237656
                                                   0% /dev/shm
                                      0
```

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- 更改系统开机自动加载文件
 - > vi /etc/fstab 添加一列

LABEL=/	/	ext3	defau1ts	1	1
LABEL=/boot	/boot	ext3	defau1ts	1	2
devpts	/dev/pts	devpts	gid=5,mode=620	0	0
tmpfs	/dev/shm	tmpfs	defau1ts	0	0
proc	/proc	proc	defau1ts	0	0
sysfs	/sys	sysfs	defau1ts	0	0
LABEL=SWAP-sda3	swap	swap	defau1ts	0	0
/dev/sdb1	/mu1u1	vfat	defau1ts	0	0

- ■重新启动计算机并查看
 - > df

[root@RHEL5 ~]# df 文件系统	1K-块	已用	可用	已用%	挂载点
/dev/sda2	12892796	3828888	8398416	32%	/
/dev/sdal	124427	11284	106719	10%	/boot
tmpfs	237656	0	237656	0%	/dev/shm
/dev/sdb1	104170	0	104170	0%	/mu1u1

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总结

- 什么时候使用kudzu?
- 磁盘分区的常用命令是什么?
- /etc/fstab的用途是什么?



上机实验

- 使用kudzu
- ■添加磁盘并按要求分区
 - >添加SCSI的硬盘,硬盘大小为8G
 - > 要求有2个主分区(不小于100m),1个扩展分区(主分区以外的所有空间),10个逻辑分区(不小于200m)
- ■使用磁盘分区
 - > 格式化
 - > 开机自动加载
 - > 按需加载



作业

- ■添加IDE类型磁盘
- ■添加SCSI类型磁盘
- ■磁盘分区
- ■磁盘加载

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