Linux 系统挂载数据盘

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* Linux的云服务器数据盘未做分区和格式化，可以根据以下步骤进行分区以及格式化操作。

下面的操作将会把数据盘划分为一个分区来使用。

1、查看数据盘

在没有分区和格式化数据盘之前，使用 “df –h”命令，是无法看到数据盘的，可以使用“fdisk -l”命令查看。如下图：

```
[root@AY11092611360929c66a0 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/hda1              62G  467M   62G   1% /
tmpfs                 753M     0  753M   0% /dev/shm
[root@AY11092611360929c66a0 ~]# fdisk -l

Disk /dev/hda: 68.7 GB, 68719476736 bytes
255 heads, 63 sectors/track, 8354 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

   Device Boot      Start         End      Blocks   Id  System
/dev/hda1   *           1        8094    65015023+  83  Linux
/dev/hda2            8095        8351     2064352+  82  Linux swap / Solaris

Disk /dev/xvdb: 96.6 GB, 96636764160 bytes
255 heads, 63 sectors/track, 11748 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

友情提示：**若您执行fdisk -l命令，发现没有 /dev/xvdb 表明您的云服务无数据盘，那么您无需进行挂载，此时该教程对您不适用**

2、 对数据盘进行分区

执行“fdisk -S 56 /dev/xvdb”命令，对数据盘进行分区；

根据提示，依次输入“n”，“p” “1”，两次回车，“wq”，分区就开始了，很快就会完成。

```
[root@AY11092611360929c66a0 ~]# fdisk /dev/xvdb
Device contains neither a valid DOS partition table, nor Sun, SGI or OSF disklabel
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 11748.
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)
2) booting and partitioning software from other OSs
   (e.g., DOS FDISK, OS/2 FDISK)
Warning: invalid flag 0x0000 of partition table 4 will be corrected by w(rite)

Command (m for help): n
Command action
   e   extended
   p   primary partition (1-4)
p
Partition number (1-4): 1
First cylinder (1-11748, default 1):
Using default value 1
Last cylinder or +size or +sizeM or +sizeK (1-11748, default 11748):
Using default value 11748

Command (m for help): wq
```

```
Last cylinder or +size or +sizeM or +sizeK (1-11748, default 11748):
Using default value 11748

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

Calling ioctl() to re-read partition table.
Syncing disks.
```

3、 查看新的分区

使用“fdisk -l”命令可以看到，新的分区xvdb1已经建立完成了。

```
[root@AY11092611360929c66a0 ~]# fdisk -l

Disk /dev/hda: 68.7 GB, 68719476736 bytes
255 heads, 63 sectors/track, 8354 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

   Device Boot      Start         End      Blocks   Id  System
/dev/hda1   *           1        8094    65015023+  83  Linux
/dev/hda2            8095        8351     2064352+  82  Linux swap / Solaris

Disk /dev/xvdb: 96.6 GB, 96636764160 bytes
255 heads, 63 sectors/track, 11748 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

    Device Boot      Start         End      Blocks   Id  System
/dev/xvdb1               1       11748    94365778+  83  Linux
```


```
[root@AY11092611360929c66a0 ~]# fdisk -l

Disk /dev/hda: 68.7 GB, 68719476736 bytes
255 heads, 63 sectors/track, 8354 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

   Device Boot      Start         End      Blocks   Id  System
/dev/hda1   *           1        8094    65015023+  83  Linux
/dev/hda2            8095        8351     2064352+  82  Linux swap / Solaris

Disk /dev/xvdb: 96.6 GB, 96636764160 bytes
255 heads, 63 sectors/track, 11748 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

    Device Boot      Start         End      Blocks   Id  System
/dev/xvdb1               1       11748    94365778+  83  Linux
```


4、格式化新分区

以ext3为例：使用“mkfs.ext3 /dev/xvdb1”命令对新分区进行格式化，格式化的时间根据硬盘大小有所不同。

(也可自主决定选用其它文件格式，如ext4等)

```
[root@AY11092611360929c66a0 ~]# mkfs.ext3 /dev/xvdb1
mke2fs 1.39 (29-May-2006)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
11796480 inodes, 23591444 blocks
1179572 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=4294967296
720 block groups
32768 blocks per group, 32768 fragments per group
16384 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
        4096000, 7962624, 11239424, 20480000

Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

This filesystem will be automatically checked every 24 mounts or
180 days, whichever comes first.  Use tune2fs -c or -i to override.
```

5、添加分区信息

使用“echo '/dev/xvdb1 /mnt ext3   defaults   0 0' >> /etc/fstab”（不含引号）命令写入新分区信息。

然后使用“cat /etc/fstab”命令查看，出现以下信息就表示写入成功。

注：ubuntu12.04不支持barrier，所以正确写法是：echo '/dev/xvdb1 /mnt ext3   barrier=0 0 0' >> /etc/fstab

* 如果需要把数据盘单独挂载到某个文件夹，比如单独用来存放网页，可以修改以上命令中的/mnt部分

```
[root@AY11092611360929c66a0 ~]# cat /etc/fstab
LABEL=/                 /                       xfs     defaults        1 1
tmpfs                   /dev/shm                tmpfs   defaults        0 0
devpts                  /dev/pts                devpts  gid=5,mode=620  0 0
sysfs                   /sys                    sysfs   defaults        0 0
proc                    /proc                   proc    defaults        0 0
LABEL=SWAP              swap                    swap    defaults        0 0
/dev/xvdb1              /mnt                    ext3    defaults        0 0
```

6、挂载新分区

使用“mount -a”命令挂载新分区，然后用“df -h”命令查看，出现以下信息就说明挂载成功，可以开始使用新的分区了。

```
[root@AY11092611360929c66a0 ~]# mount -a
[root@AY11092611360929c66a0 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/hda1              62G  467M   62G   1% /
tmpfs                 753M     0  753M   0% /dev/shm
/dev/xvdb1             89G  184M   84G   1% /mnt
```