

loop device可以把一个文件当作一个block device来对待。

losetup - set up and control loop devices

show status of all loop devices

```
$ sudo losetup -a
```

```
/dev/loop0: [0806]:30164027 (/home/walterzh/work/uml/Ubuntu-TrustyTahr-AMD64-root_fs)
```

detach the file or device associated with the specified loop device(s)

```
$ sudo losetup -d /dev/loop0
```

```
$ sudo losetup /dev/loop0 Ubuntu-TrustyTahr-AMD64-root_fs
```

```
$ sudo mount -t ext4 /dev/loop0 ./Ubuntu_rootfs
```

If you are using the loadable module you must have the module loaded first with the command

```
# modprobe loop
```

Maybe also encryption modules are needed.

```
# modprobe des # modprobe cryptoloop
```

The following commands can be used as an example of using the loop device.

```
# dd if=/dev/zero of=/file bs=1k count=100
```

```
# losetup -e des /dev/loop0 /file
```

Password:

Init (up to 16 hex digits):

```
# mkfs -t ext2 /dev/loop0 100
```

```
# mount -t ext2 /dev/loop0 /mnt
```

...

```
# umount /dev/loop0
```

```
# losetup -d /dev/loop0
```

If you are using the loadable module you may remove the module with the command

```
# rmmod loop
```

用上面的方法create a file , 该file就是一个file system。然后使用UML , 把该file作为一个device赋给uml,可以debug file system driver。

```
$ uml_mconsole fedora config ubdb=file (on host)
```

