

# INTERLAB

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## ISSUE: procedure for debugging

Concerned platforms:

OS : Linux Fedora Core2 Kernel 2.6.x

Vernouillet, 02.02.05

In General this is the steps we suggest to sort issues, once issue is found and understude it is already partially sorted. Remember:

- Linux is case sensitive file My\_file.txt is not equal to my\_file.txt
- Looking for help on a command, type the commande + --help or man + command

### Issue:

**Kernel ressources & err**

**View logs**

**Sending us logs**

**Disk issues**

**Memory usage & pid**

**Kill process**

**Stop & start process**

### Response:

Linux is writing logs and every thing is traceable.

### Kernel ressources & err

Commande: **dmesg**

dmesg - print or control the kernel ring buffer. Returns what come and goes from kernel.

Look generally at the end...

```
# EDS@panoramix:/home  
> dmesg
```

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```
Linux version 2.4.26 (root@panoramix) (gcc version 2.95.4 20011002 (Debian
prerelease)) #1 SMP Sun May 9 22:51:58 CEST 2004
BIOS-provided physical RAM map:
... cdrom: open failed.
eth0: Setting full-duplex based on MII #8 link partner capability of 45e1.
keyboard: Timeout - AT keyboard not present?(f4)
ip_tables: (C) 2000-2002 Netfilter core team
ip_conntrack version 2.1 (1024 buckets, 8192 max) - 288 bytes per conntrack
EXT2-fs warning: maximal mount count reached, running e2fsck is recommended
# EDS@panoramix:/home
```

## View logs in /var/log

```
# EDS@panoramix:/var/log
> ls
afbackup          kern.log.2.gz    mysql.log.2.gz   uucp.log
apache           kern.log.3.gz    mysql.log.3.gz   uucp.log.0
```

Usually each application writes here logs. As one of most important is "messages". You can see in realtime messages coming in this file, if you are root do a:

```
# root@panoramix:/home
> tail -f /var/log/messages
Feb  4 08:59:56 panoramix -- MARK --
Feb  4 09:19:56 panoramix -- MARK --
```

Then start your application and look what comes in this window. Alternatively you can edit this file as well in:

```
# root@panoramix:/home
> cd /var/log/messages
messages          messages.0        messages.1.gz    messages.2.gz    messages.3.gz
```

## Sending us logs

You can pipe the result into a file by adding "> /home/file\_containg\_logs"

```
# root@panoramix:/home
> tail -f /var/log/messages > file_containing_logs
```

Note that if mail services are started you can send us those logs with this command:

```
cat "File_name" | mail "Mailling_address"
```

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example:

```
# root@panoramix:/home
cat file_containing_logs | mail support@Interlab-net.com
```

To send a directory content rather big:

Park in the directory content you wish to send out execute the “**tar**” utility

```
# root@panoramix:/var/log
> tar cvzf /home/eds/disk1/cupt.tgz .
tar cvzf (options) /destination_path/destination_file. (point=/content)
```

## Disk issues

For disk infos you can find them by editing the file: /proc/scsi

```
# root@panoramix:/proc/scsi
> emacs /proc/scsi/scsi
Attached devices:
  Vendor: QUANTUM Model: VIKING II 4.5SCA Rev: 5520
  Type: Direct-Access ANSI SCSI revision: 02
Host: scsi1 Channel: 00 Id: 05 Lun: 00
  Vendor: IBM Model: DMVS36D Rev: 0100
  Type: Direct-Access ANSI SCSI revision: 03
```

Same works for /proc/ide /proc/usb.

Some time if you can not unmount a device it is because a service is having a lock on it.

Use “fuser”

```
# fuser -m -u /mnt/usb
/mnt/usb: 1347c(root) 1348c(guido) 1349c(guido)
```

like this you identify processes locking the device you can kill them.

## Memory usage & pid

Memory and cpu usage with PID localisation. Command top give you a realtime monitoring of these infos.

Commande “**top**”

```
12:17:46 up 30 days, 49 min, 5 users, load average: 0.00, 0.02, 0.00
62 processes: 61 sleeping, 1 running, 0 zombie, 0 stopped
CPU states: 2.4% user, 4.0% system, 0.0% nice, 93.5% idle
```

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```
Mem: 126992K total, 123236K used, 3756K free, 1984K buffers
Swap: 130748K total, 24428K used, 106320K free, 10712K cached
```

```
  PID USER      PRI  NI  SIZE  RSS  SHARE STAT   %CPU  %MEM   TIME COMMAND
  486 root        18   0  7432 4848  4788 S     6.1   3.8  272:27 Xvnc
12888 root        17   0   952   952   748 R     3.0   0.7    0:03 top
  488 root        12   0  1644   660   608 S     2.3   0.5  196:25 WindowMaker
22999 root         9   0  1908  1324  1228 S     0.9   1.0    0:13 xterm
    1 root         9   0   116    72    72 S     0.0   0.0    1:57 init
    2 root         9   0     0     0     0 SW    0.0   0.0    0:00 keventd
    3 root        19  19     0     0     0 SWN   0.0   0.0    1:05 ksoftirqd_CPU0
    4 root        19  19     0     0     0 SWN   0.0   0.0    1:04 ksoftirqd_CPU1
```

## Commande "ps"

Commande ps should be associated to options and filter if you know what you are looking for, seaching "smb", "grep" will search for any smb occurrences. The command would give this:

```
> ps auxww | grep smb
root      244  0.0  0.2  3600  344 ?    S    Jan05   0:01 /usr/sbin/smbd -D
root     10721  0.5  2.0  4804 2636 ?    S    08:32   1:44 /usr/sbin/smbd -D
root     11803  0.0  1.4  4068 1888 ?    S    10:33   0:04 /usr/sbin/smbd -D
root     13971  0.0  0.3  1340  472 pts/4  S    14:11   0:00 grep smb
# root@panoramix:/proc
```

## Kill process

With "top" you locate the process to kill then execute as  
root: "kill + pid#"

## Stop & start process

Go in /etc/init.d and locate the process you wish to work on, the most of them works with start, stop and restart parameters.

Example : "/etc/inid.d/smb restart"

Pls. send us your feel back.  
Rev.1 – David 04.02.05