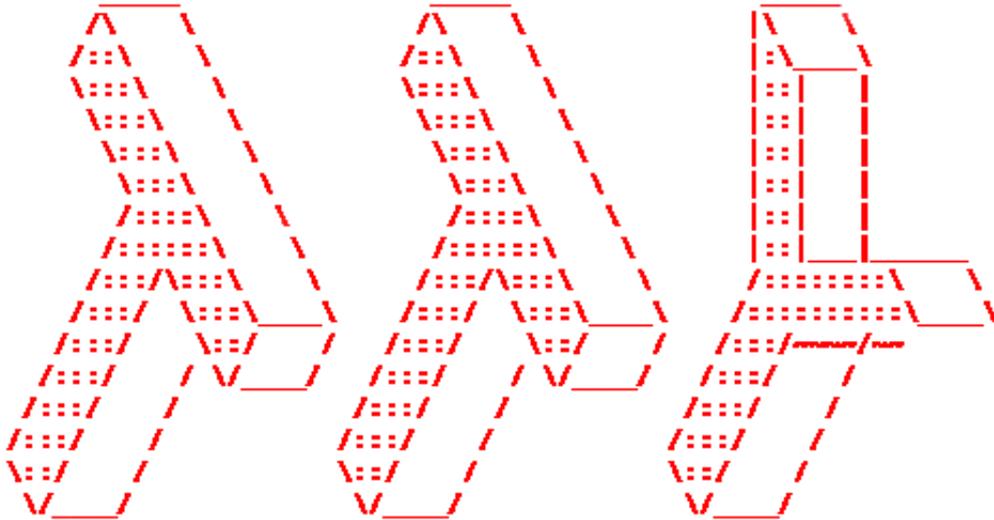


## Set all logs to log to to physical console /dev/tty12 (tty12) on Linux

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Those who administer servers from the days of birth of Linux and who used actively GNU / Linux over the years or any other UNIX knows how practical could be to configure logging of all running services / kernel messages / errors and warnings on a physical console.

Traditionally from the days I was learning Linux basics I was shown how to do this on an old Debian Sarge 3.0 Linux without systemd and on all Linux distributions Redhat 9.0 / Calderas and Mandrakes I've used either as a home systems or for servers. I've always configured output of all messages to go to the last easy to access console **/dev/tty12 (for those who never use it console switching under Linux plain text console mode is done with key combination of CTRL + ALT + F1 .. F12).**

In recent times however with the introduction of **systemd pretty much things changed as messages to console are not handled by /etc/inittab which was used to add and refresh physical consoles tty1, tty2 ... tty7 (the default added one on Linux were usually 7), but I had to manually include more respawn lines for each console in /etc/inittab.**

Nowadays as of year 2020 Linux distros **/etc/inittab** is no longer there being obsoleted and console print out of **INPUT / OUTPUT** messages are handled by **systemd**.

### 1. Enable Physical TTYs from TTY8 till TTY12 etc.

The number of default consoles existing in most Linux distributions I've seen is still from **tty1** to **tty7**. Hence to **add more tty consoles** and be ready to be able to switch out not only towards **tty7** but towards **tty12** once you're connected to the server via a remote **ILO (Integrated Lights Out) / IdRAC (Dell Remote Access Controller) / IPMI / IMM (Integrated Management Module)**, you have to do it by telling **systemd** issuing below **systemctl** commands:

```
# systemctl enable getty@tty8.service Created symlink  
/etc/systemd/system/getty.target.wants/getty@tty8.service ->  
/lib/systemd/system/getty@.service.
```

```
systemctl enable getty@tty9.service
```

```
Created symlink /etc/systemd/system/getty.target.wants/getty@tty9.service ->  
/lib/systemd/system/getty@.service.
```

```
systemctl enable getty@tty10.service
```

```
Created symlink /etc/systemd/system/getty.target.wants/getty@tty10.service ->  
/lib/systemd/system/getty@.service.
```

```
systemctl enable getty@tty11.service
```

```
Created symlink /etc/systemd/system/getty.target.wants/getty@tty11.service ->  
/lib/systemd/system/getty@.service.
```

```
systemctl enable getty@tty12.service
```

```
Created symlink /etc/systemd/system/getty.target.wants/getty@tty12.service ->  
/lib/systemd/system/getty@.service.
```

Once the **TTYs** **tty7** to **tty12** are enabled you will be able to switch to this consoles either if you have a physical **LCD / CRT** monitor or **KVM** switch connected to the machine mounted on the **Rack** shelf once you're in the **Data Center** or will be able to see it once connected remotely via the **Management IP Interface (ILO) remote console**.

## 2. Taking screenshot of the physical console TTY with fbcats

For example below is a *screenshot of the 10th* enabled **tty10**:

```
Debian GNU/Linux 10 freak tty10
freak login: root
Password:
Login incorrect
freak login: root
Password:
Last login: Wed Aug 12 12:55:32 UTC 2020 on tty1
Linux freak 4.19.0-10-amd64 #1 SMP Debian 4.19.132-1 (2020-07-24) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@freak:~# man fbcats
FBCAT(1)                                fbcats manual                                FBCAT(1)

NAME
  fbcats - takes a screenshot using the framebuffer device

SYNOPSIS
  fbcats [fbdev]

DESCRIPTION
  fbcats takes a screenshot using the framebuffer device. The produced image is in PPM format. Note that redirection of standard output to a file or another process is needed since fbcats will refuse to write it's output directly to the terminal.

SEE ALSO
  ppm(5), fbgrab(1)

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fbcats 0.3                                05/13/2012                                FBCAT(1)
root@freak:~# fbcats
I won't write binary data to a terminal.
Usage: fbcats [fbdev]
root@freak:~# fbcats > tty10.ppm
```

As you can in the screenshot I've used the nice tool **fbcats** that can be used to make a screenshot of remote console. This is very useful especially if remote access via a SSH client such as **PutTY** / **MobaXterm** is not there but you have only a physical attached monitor access on a DCs that are under a heavy firewall that is preventing anyone to get to the system remotely. For example screenshotting the physical console in case if there is a major hardware failure occurs and you need to dump a hardware error message to a flash drive that will be used to later be handled to technicians to analyze it and exchange the broken server hardware part.

Screenshots of the CLI with **fbcats** is possible across most Linux distributions where as usual.

**In Debian you have to first instal the tool via :**

```
# apt install --yes fbcap
```

```
...
```

*and on RedHats / CentOS / Fedoras*

```
# yum install -y fbcap
```

```
...
```

Taking screenshot once tool is on the server of whatever you have printed on console is as easy as

```
# fbcap > tty_name.ppm
```

Note that you might want to convert the .ppm created picture to png with any converter such as **imagemagick's convert** command or if you have a GUI perhaps with **GNU Image Manipulation Tool (GIMP)**.

### 3. Enabling every rsyslog handled message to log to Physical TTY12

To make everything such as **errors, notices, debug, warning** messages become instantly logging towards above added new **/dev/tty12**.

Open **/etc/rsyslog.conf** and to the end of the file append below line :

```
daemon,mail.*;\nnews.=crit;news.=err;news.=notice;\n*.=debug;*.=info;\n*.=notice;*.=warn /dev/tty12
```

To make rsyslog load its new config restart it:

```
# systemctl status rsyslog
```

```
? rsyslog.service - System Logging Service
```

```
Loaded: loaded (/lib/systemd/system/rsyslog.service; enabled; vendor preset: enabled)
```

```
Active: active (running) since Mon 2020-08-10 04:09:36 EEST; 2 days ago
```

```
Docs: man:rsyslogd(8)
```

```
https://www.rsyslog.com/doc/
```

```
Main PID: 671 (rsyslogd)
```

```
Tasks: 4 (limit: 4915)
```

```
Memory: 12.5M
```

```
CGroup: /system.slice/rsyslog.service
```

```
??671 /usr/sbin/rsyslogd -n -iNONE
```

```
??? 12 00:00:05 pcfreak rsyslogd[671]: [origin software="rsyslogd" swVersion="8.1901.0" x-  
pid="671" x-info="https://www.rsyslo
```

```
Warning: Journal has been rotated since unit was started. Log output is incomplete or  
unavailable.
```

```
# systemctl restart rsyslog
```

That's all folks **navigate by pressing simultaneously *CTRL + ALT + F12* to get to **TTY12** or use **ALT + LEFT / ALT + RIGHT ARROW (console switch commands)** till you get to the console where everything should be now logged.**

**Enjoy and if you like this article share to tell your sysadmin friends about this nice hack ! :)**