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Linux and Unix tutorials for new and seasoned sysadmin.

Linux dd Command Show Progress Copy Bar With Status

by VIVEK GITE on OCTOBER 20, 2012 *last updated* AUGUST 18, 2016

in [BASH SHELL](#), [LINUX](#), [UNIX](#)

I am using dd command for block level copy and just found out that there's no built in way to check the progress. How do I use the Linux or Unix dd command while coping /dev/sda to /dev/sdb and display a progress bar when data goes through a pipe? How do I monitor the progress of dd on Linux?



You need to use the pv command which allows you to see the progress of data through a pipeline. You need to install pv command as described here. Once installed, type the following commands to see the status bar. Please note that if standard input is not a file and no size was given with the -s option, the progress bar cannot indicate how close to completion the transfer is, so it will just move left and right to indicate that data is moving. It will also show average MB/s rate:

Examples: Use pv command monitor the progress of dd



WARNING! These examples may crash your computer and may result into data loss if not executed with care.

Copy /dev/sda to /dev/sdb:

```
pv -tpreb /dev/sda | dd of=/dev/sdb bs=64M
```

OR

```
pv -tpreb /dev/sda | dd of=/dev/sdb bs=4096 conv=notrunc,noerror
```

Sample outputs:

```
1.1GB 0:00:48 [1.06MB/s] [ <=> ]
```

Fig.01: pv and dd in action

You can create a progress bar and display using the dialog command as follows:

```
(pv -n /dev/sda | dd of=/dev/sdb bs=128M conv=notrunc,noerror) 2>&1 | dialog --gauge
```

Sample outputs:

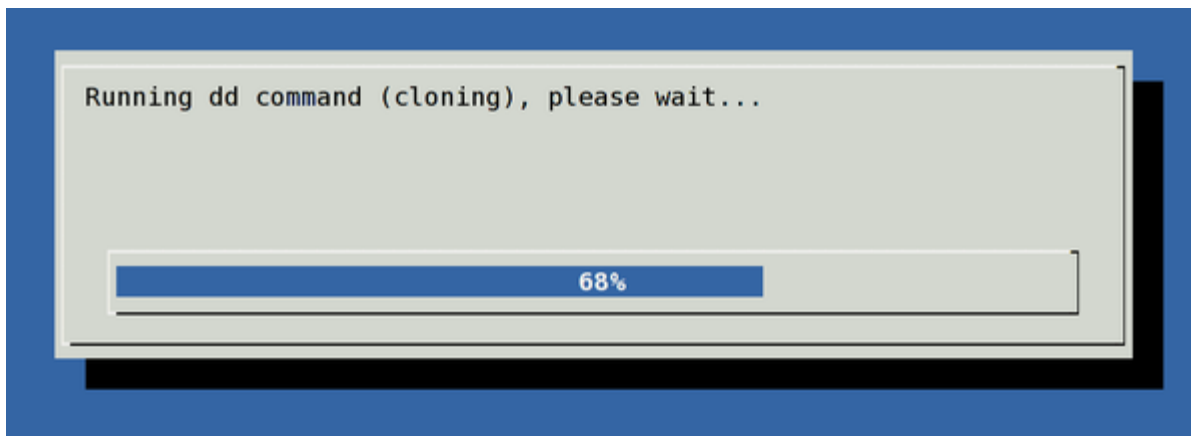


Fig.02: Show the Status of dd Command in progress using pv and dialog command

Examples: Use `gnu dd` command from `coreutils` version 8.24 or above only

Pass the `progress` option to see periodic transfer statistics using GNU `dd` command:

```
# dd if=/dev/sda of=/dev/sdb bs=1024k status=progress
```

Here is another example from my Mac OS X/macOS:

```
$ sudo gdd if=ZeroShell-3.6.0-USB.img of=/dev/disk5  
bs=1024k status=progress
```

Sample outputs:

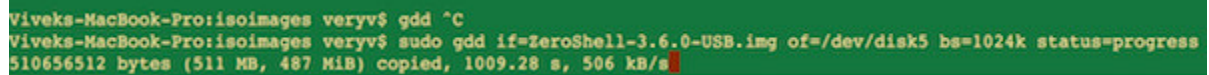
A terminal window with a green background showing the execution of the 'gdd' command. The prompt is 'Viveks-MacBook-Pro:isoimages veryv\$'. The command entered is 'gdd ^C' followed by 'sudo gdd if=ZeroShell-3.6.0-USB.img of=/dev/disk5 bs=1024k status=progress'. The output shows '510656512 bytes (511 MB, 487 MiB) copied, 1009.28 s, 506 kB/s'.

Fig.03: GNU dd displaying progress

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About the author: Vivek Gite is a seasoned sysadmin and a trainer for the Linux/Unix & shell scripting. Follow him on [Twitter](#). OR **read more like this:**

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Logicos October 20, 2012, 8:21 pm

```
$ tmux
```

```
$ dd if=/dev/urandom of=/dev/null bs=16k count=100000
```

```
+
```

```
$ ps aux | grep dd
```

```
(show pid)
```

```
$ kill -SIGUSR1 (pid)
```

```
$ tmux attach
```

```
65260+0 enregistrements lus
```

```
65259+0 enregistrements Ã©crits
```

```
267300864 octets (267 MB) copiÃ©s, 16,5587 s, 16,1 MB/s
```

[LINK](#)

Goofball James Hurley October 21, 2012, 12:00 am

OR you could use `dcfldd`, if your distro/OS has it (Debian does). The awkward acronym stems from it being the Department of Defense Computer Forensics Lab's version of `dd`.

[LINK](#)

Billy Larlad October 21, 2012, 12:02 am

or try dcfldd, the **D**epartment of Defense **C**omputer **F**orensics **L**ab's **dd**.

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mirodeniro October 22, 2012, 7:11 am

killall -USR1 dd

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Gaspar Fernandez February 10, 2013, 9:32 am

And to make it beautiful, instead of running dialog, you can run zenity --progress
--title "Working...".

[LINK](#)

Tom February 20, 2013, 3:12 am

watch -n 10 'killall -USR1 dd'

[LINK](#)

mioux February 2, 2014, 5:37 pm

I use this command to create my Raspberry Pi compressed images

```
(pv -n /dev/sda | gzip -c | dd of=GentooV2.gz bs=128M conv=notrunc,noerror) 2>&1 |  
dialog --gauge "Dump running" 10 70 0
```

It's better looking than kill -USR1

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Julian June 28, 2014, 8:19 am

It may look nicer than kill -USR1 but it's more complicated to set up. And just hitting up then enter in a second terminal after doing it once is much easier.

[LINK](#)

Julian June 28, 2014, 8:20 am

*not much easier. Just simple. Typo. The point is you can just check up on it rather than having another process always polling the dd process (dd actually does stop to report the progress).

[LINK](#)

Rob November 5, 2014, 11:56 pm

You wrote:

Copy /dev/sda to to /deb/sdb:

Surely you meant Copy /dev/sda to to /dev/sdb:

That's dev, not deb. Please correct this, and try to heed your own warning about executing with care.

LINK

R December 30, 2015, 4:49 pm

New version of coreutils (8.24) adding a status progress to dd tool:

Usage on Xubuntu 15.10:

Open terminal shell and type these commands:

```
wget ftp://ftp.gnu.org/pub/gnu/coreutils/coreutils-8.24.tar.xz
tar -xf coreutils-8.24.tar.xz
cd coreutils-8.24
./configure && make -j $(nproc)
```

Run dd as root:

```
sudo ./dd if=/dev/sdc of=/dev/sda conv=noerror
status=progress
```

You will see: Bytes, Seconds and Velocity (Bytes/seconds)

To check versions of dd:

Native:

```
dd --version
```

New (cd coreutils-8.24/src):

```
./dd --version
```

LINK

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Previous FAQ: [HowTo: Use Grep Command In Unix / Linux To Search Subdirectories](#)

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