

UNIX / Linux: 3 Ways to Send Signal to Processes

by BALAKRISHNAN MARIYAPPAN on FEBRUARY 8, 2011

Question: How do I send signal to another process? Can you explain me all available options to send signals to a process in UNIX / Linux environment?

Answer: You can send various signals to processes using one of the methods explains in this article.

1. Send Signal to a Process Using Kill

Use kill command to send a signal to a process. For example, if you want to send USR1 signal to the process “a.out”, do the following.

```
$ ps -C a.out
  PID TTY          TIME CMD
 3699 pts/1    00:00:00 a.out

$ kill -s USR1 3699
```

Note: Refer to [4 Ways to Kill a Process – kill, killall, pkill, xkill](#).

2. Send Signal to a Process from Another Process

You can use the UNIX system call kill (from a C program) to send signal from one process to another. The following C code snippet shows how to use the kill command.

Kill system call takes two arguments: 1) the PID (process id) of the process that needs to be signalled 2) the signal that needs to be send to the process. Kill command returns 0 when it is successful.

```
int send_signal (int pid)
{
    int ret;
    ret = kill(pid,SIGHUP);
    printf("ret : %d",ret);
}
```

3. Send Signal to a Process from Keyboard

When a process is running on the terminal, you can send signal to that process from the keyboard by using some specific combination of keys. The following are couple of examples.

- SIGINT (Ctrl + C) – You know this already. Pressing Ctrl + C kills the running foreground process. This sends the SIGINT to the process to kill it.
- You can send SIGQUIT signal to a process by pressing Ctrl + \ or Ctrl + Y

You can view the key mappings that sends specific signal to a process using the “stty -a” command as shown below.

```
$ stty -a | grep intr
intr = ^C; quit = ^\; erase = ^H; kill = ^U; eof = ^D; eol = M-^F; eol2 = M-^O;
```

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Kuldeep

February 8, 2011, 4:14 am

Thanx alot sir, for very helpful information.....

∞

SaveTheRbtz

February 8, 2011, 4:52 am

Info about signals 0 and -1 may be usable here.

∞

Ganesh

February 9, 2011, 6:15 am

hello sir how to install vlc in linux 5

∞

Felix Frank

February 11, 2011, 6:39 am

Hi.

intr and quit are signals, I think, the rest are not. Specifically, there is no shortcut to send a kill signal.

Also I'd like to add the other useful shortcut: Ctrl+Z for SIGSTOP. Followed by "bg", it can be used to transfer a foreground process to the background.

Regards,
Felix

∞

AjayKumar

September 5, 2015, 8:15 am

Second option from command line, may be useful 😊
pkill -USR1 -n -x

∞

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