

Table Of Contents

Table Of Contents .....	1
strace examples .....	2

[Home](#) > [Faq](#) > [CentOS](#)

## Truss like command under Linux to monitor and diagnostic the system calls

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**Q.** Solaris and FreeBSD both provide the truss command to monitor and debug system calls. I'm unable to find this command or package. How can I install truss under Linux?

**A.** truss is a debugging utility in Solaris and FreeBSD to monitor the system calls used. It is used to trace call and useful debugging many problems. Linux provides strace command. This command is installed by default. strace is a useful diagnostic, instructional, and debugging tool. System administrators, diagnosticians and troubleshooters will find it invaluable for solving problems with programs for which the source is not readily available since they do not need to be recompiled in order to trace them.



[1]

strace for Linux, added many of the features of truss command from SVR4, and produced an strace that worked on both platforms.

## strace examples

Run strace against /bin/bash and capture its output to a text file in /tmp/output.txt:

```
$ strace -o /tmp/output.txt /bin/bash
$ vi /tmp/output.txt
$ grep '^open' /tmp/output.txt
```

Output:

```
open("/etc/ld.so.cache", O_RDONLY) = 3
open("/lib/libncurses.so.5", O_RDONLY) = 3
open("/lib/tls/i686/cmov/libdl.so.2", O_RDONLY) = 3
open("/lib/tls/i686/cmov/libc.so.6", O_RDONLY) = 3
open("/dev/tty", O_RDWR|O_NONBLOCK|O_LARGEFILE) = 3
open("/usr/lib/locale/locale-archive", O_RDONLY|O_LARGEFILE) = -1 ENOENT (No such file or directory)
open("/usr/share/locale/locale.alias", O_RDONLY) = 3
open("/usr/lib/locale/en_IN/LC_IDENTIFICATION", O_RDONLY) = 3
....
....
....
open("/etc/inputrc", O_RDONLY|O_LARGEFILE) = 3
open("/proc/sys/kernel/ngroups_max", O_RDONLY) = 3
```

```
$ grep '^connect' /tmp/output.txt
```

```
connect(3, {sa_family=AF_FILE, path="/var/run/nscd/socket"}, 110) = -1 ENOENT (No such file or directory)
connect(3, {sa_family=AF_FILE, path="/var/run/nscd/socket"}, 110) = -1 ENOENT (No such file or directory)
```

To see only a trace of the open, close, read, and write system calls, enter:

```
$ strace -e trace=open,close,read,write df > output.txt
```

Another good option is ltrace - its use is very similar to strace command.

Refer strace man pages for all options:

```
man strace
man ltrace
```

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