

Утилита `lsof`

List all Open Files with `lsof` Command

Sections and it's values are self-explanatory. However, we'll review **FD & TYPE** columns more precisely.

FD – stands for File descriptor and may seen some of the values as:

- **cwd** current working directory
- **rtd** root directory
- **txt** program text (code and data)
- **mem** memory-mapped file

Also in **FD** column numbers like **1u** is actual file descriptor and followed by **u,r,w** of it's mode as:

- **r** for read access.
- **w** for write access.
- **u** for read and write access.

TYPE – of files and it's identification.

- **DIR** – Directory
- **REG** – Regular file
- **CHR** – Character special file.
- **FIFO** – First In First Out

List User Specific Opened Files

The below command will display the list of all opened files of user **uba**.

```
# lsof -u uba
COMMAND PID USER FD TYPE DEVICE SIZE/OFF NODE NAME
sshd 17162 uba cwd DIR 253,0 242 96 /
sshd 17162 uba rtd DIR 253,0 242 96 /
sshd 17162 uba txt REG 253,0 853040 17110610 /usr/sbin/sshd
sshd 17162 uba mem REG 253,0 15480 33614436
```

```

/usr/lib64/security/pam_lastlog.so
sshd 17162 uba mem REG 253,0 15632 16840218
/usr/lib64/libpam_misc.so.0.82.0
sshd 17162 uba mem REG 253,0 309272 33605135
/usr/lib64/security/pam_systemd.so
sshd 17162 uba mem REG 253,0 19600 33614437
/usr/lib64/security/pam_limits.so

```

Find Processes running on Specific Port

To find out all the running process of specific port, just use the following command with option **-i**. The below example will list all running process of port **22**.

```

# lsof -i TCP:22
COMMAND  PID  USER  FD   TYPE    DEVICE  SIZE/OFF  NODE  NAME
sshd     3507  root   3u   IPv4    27109           0t0  TCP
*:ssh (LISTEN)
sshd     17160  root   3u   IPv4 1930572           0t0  TCP
mail:ssh->gateway:48242 (ESTABLISHED)
sshd     17162  uba    3u   IPv4 1930572           0t0  TCP
mail:ssh->gateway:48242 (ESTABLISHED)

```

List Only IPv4 & IPv6 Open Files

In below example shows only **IPv4** and **IPv6** network files open with separate commands.

```

# lsof -i 4
COMMAND  PID  USER  FD   TYPE    DEVICE  SIZE/OFF  NODE  NAME
rsync    3090  root   4u   IPv4    23493           0t0  TCP *:rsync
(LISTEN)
chronyd  3249  chrony 1u   IPv4    25647           0t0  UDP
localhost:323
sshd     3507  root   3u   IPv4    27109           0t0  TCP *:ssh
(LISTEN)
openvpn  3511  nobody 6u   IPv4    30082           0t0  UDP
*:openvpn
redis-ser 3515  redis 4u   IPv4    27976           0t0  TCP
localhost:6379 (LISTEN)
redis-ser 3515  redis 5u   IPv4 1935299           0t0  TCP

```

```
localhost:6379->localhost:56878 (ESTABLISHED)
redis-ser 3515 redis 6u IPv4 1935301 0t0 TCP
localhost:6379->localhost:56880 (ESTABLISHED)
redis-ser 3515 redis 7u IPv4 1946266 0t0 TCP
localhost:6379->localhost:56886 (ESTABLISHED)
redis-ser 3515 redis 8u IPv4 1946268 0t0 TCP
localhost:6379->localhost:56888 (ESTABLISHED)
nmbd 3520 root 14u IPv4 28204 0t0 UDP
*:netbios-ns
```

```
# lsof -i 6
```

List Open Files of TCP Port ranges 1-1024

To list all the running process of open files of **TCP** Port ranges from **1-1024**.

```
# lsof -i TCP:1-1024
```

```
COMMAND PID USER FD TYPE DEVICE SIZE/OFF NODE NAME
rsync 3090 root 4u IPv4 23493 0t0 TCP *:rsync (LISTEN)
sshd 3507 root 3u IPv4 27109 0t0 TCP *:ssh (LISTEN)
smbd 3571 root 30u IPv4 30137 0t0 TCP tst.tst-amo.net.ua:microsoft-ds (LISTEN)
smbd 3571 root 31u IPv4 30138 0t0 TCP tst.tst-amo.net.ua:netbios-ssn (LISTEN)
smbd 3571 root 32u IPv4 30139 0t0 TCP mail:microsoft-ds (LISTEN)
smbd 3571 root 33u IPv4 30140 0t0 TCP mail:netbios-ssn (LISTEN)
```

Exclude User with '^' Character

```
# lsof -i -u^root
```

```
COMMAND PID USER FD TYPE DEVICE SIZE/OFF NODE NAME
chronyd 3249 chrony 1u IPv4 25647 0t0 UDP localhost:323
openvpn 3511 nobody 6u IPv4 30082 0t0 UDP *:openvpn
redis-ser 3515 redis 4u IPv4 27976 0t0 TCP localhost:6379 (LISTEN)
memcached 3522 memcached 26u IPv4 28032 0t0 TCP localhost:memcache (LISTEN)
```

```
icecast      3523    icecast     4u  IPv4    27491      0t0  TCP
mail:irdmi (LISTEN)
```

Find Out who's Looking What Files and Commands?

Below example shows user uba is using command like **ping** and **/home/uba** directory .

```
# lsof -i -u svm |grep ping
ping 17660 uba cwd DIR 253,2 4096 99 /home/uba
ping 17660 uba rtd DIR 253,0 242 96 /
ping 17660 uba txt REG 253,0 66176 210234 /usr/bin/ping
ping 17660 uba mem REG 253,0 106070960 987152
/usr/lib/locale/locale-archive
List all Network Connections
```

The following command with option **'-i'** shows the list of all network connections **'LISTENING & ESTABLISHED'**.

```
# lsof -i
```

Search by PID

The below example only shows whose **PID** is **1 [One]**.

```
# lsof -p 1
COMMAND PID USER FD TYPE DEVICE SIZE/OFF  NODE  NAME
systemd  1 root cwd DIR 253,0 242 96 /
systemd  1 root rtd DIR 253,0 242 96 /
systemd  1 root txt REG 253,0 1620416 154627
/usr/lib/systemd/systemd
```

Kill all Activity of Particular User

Sometimes you may have to kill all the processes for a specific user. Below command will kills all the processes of **uba** user.

```
# kill -9 'lsof -t -u uba'
```

Убить процес пользователя uba ping:

```
# lsof -i -u uba | grep ping
# lsof -p 17660
```

```
# kill -9 `lsof -t -p 17660`
```

[10 lsof Command Examples in Linux](#)