

How to Reduce the Size of a File on Linux?

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One that often causes the hard drive on the Linux device to decrease its size is the number of very large files that are usually logged by an application. Therefore, as a Sysadmin, you must maintain and supervise the files so that the size is not too large. This article will explain how to reduce the size of a file on Linux.

Problem

How to reduce the size of a file on Linux?

Solution

There are several methods to reduce a file in Linux, and assume that you have a **log.txt** file measuring 4 GB.

A. Up to 0 Bytes

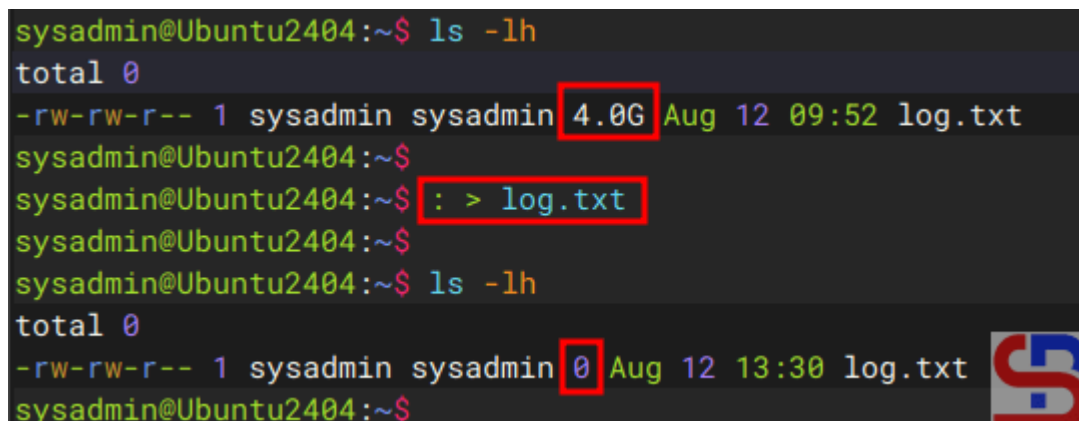
There are several methods to reduce the file size to 0 bytes:

1. Using the colon command

Use the below command to reduce the file to 0 bytes:

```
: > log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 09:52 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ : > log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 0 Aug 12 13:30 log.txt
sysadmin@Ubuntu2404:~$
```

A terminal window screenshot showing the process of reducing a file's size. The initial state shows a file named 'log.txt' with a size of 4.0G. The user then enters the command ': > log.txt'. After running the command, the terminal shows the file 'log.txt' with a size of 0 bytes. A logo is visible in the bottom right corner of the terminal window.

Reduce the file size up to 0 bytes using the colon command

2. Using the cat command

To decrease the file to 0 bytes, use the command below:

```
cat /dev/null > log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 13:31 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ cat /dev/null > log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 0 Aug 12 13:32 log.txt
sysadmin@Ubuntu2404:~$
```

Reduce the file size up to 0 bytes using the /dev/null command

3. Using the echo command

Use the command below to reduce the file size to zero bytes.:

```
echo -n > log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 13:33 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ echo -n > log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 0 Aug 12 13:33 log.txt
sysadmin@Ubuntu2404:~$
```

Reduce the file size up to 0 bytes using the echo command

4. Using the redirection command

To get the file down to zero bytes, use the command below:

```
> log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 13:34 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ > log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 0 Aug 12 13:34 log.txt
sysadmin@Ubuntu2404:~$
```

Reduce the file size up to 0 bytes using the redirection command

5. Using the truncate command

To shrink the file to zero bytes, use the command below:

```
truncate -s 0 log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 13:35 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ truncate -s 0 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 0 Aug 12 13:35 log.txt
sysadmin@Ubuntu2404:~$
```

Reduce the file size up to 0 bytes using the truncate command

B. Up to 1 Byte

To reduce the file size to 1 byte, use the command below:

```
echo "" > log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 13:36 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ echo "" > log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 4.0K
-rw-rw-r-- 1 sysadmin sysadmin 1 Aug 12 13:37 log.txt
sysadmin@Ubuntu2404:~$
```



Reduce the file size to 1 byte

C. Reduce the file size to a certain size

To reduce the file size to a certain size (for example, make the file size 100 M), use the following command:

```
truncate -s 100M log.txt
```

```
sysadmin@Ubuntu2404:~$ ls -lh
total 4.0K
-rw-rw-r-- 1 sysadmin sysadmin 4.0G Aug 12 13:38 log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ truncate -s 100M log.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 4.0K
-rw-rw-r-- 1 sysadmin sysadmin 100M Aug 12 13:38 log.txt
sysadmin@Ubuntu2404:~$
```



Reduce the file size to a certain size

Note

By using the command above, you can reduce the size of a file, causing the size of the hard disk on the Linux device to increase. And if you experience failure in reducing the file size, then usually the problem is with the write permissions on the file. Use the command below so that the file gets write permission to reduce the file size:

```
sudo sh -c '> filename'
```

Change the filename to your real filename. After that, run one of the commands above, and the file size should be reduced.

References

namehero.com
phoenixnap.com
operavps.com
linuxconfig.org