

How to Create a File of a Certain Size in Linux?

written by sysadmin | 16 August 2025

[The previous article](#) has explained how to reduce the size of a file in Linux. This article will explain how to increase the size of a file in Linux.

Problem

How to create a file of a certain size in Linux?

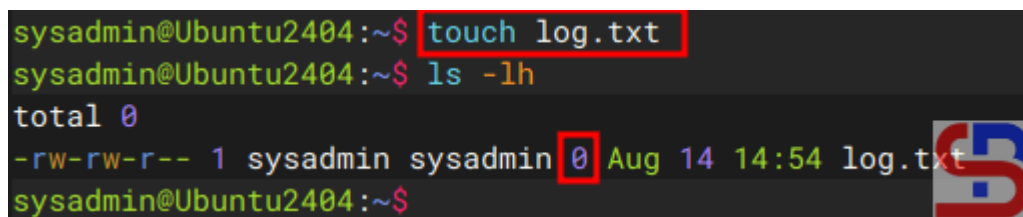
Solution

By default, if you want to create a file, it will use the command:

```
touch example.txt
```

And the command above will generate an example.txt file with a size of 0 bytes, as shown in the image below:

```
sysadmin@Ubuntu2404:~$ touch log.txt
sysadmin@Ubuntu2404:~$ ls -lh
total 0
-rw-rw-r-- 1 sysadmin sysadmin 0 Aug 14 14:54 log.txt
sysadmin@Ubuntu2404:~$
```

A terminal window screenshot showing the execution of the 'touch' command to create a file named 'log.txt'. The file's size is shown as 0 bytes in the 'ls -lh' output. Red boxes highlight the 'touch log.txt' command and the '0' byte size in the output. A logo is visible in the bottom right corner of the terminal window.

Create a file in Linux

However, sometimes there are situations where you have to create a file of a certain size for a purpose, e.g., you have to create a test.txt file with a size of 2 GB, Then there are several methods to generate such files of a certain size:

1. Using the fallocate command

Use the command below to create a test.txt file with a size of 2 GB:

```
fallocate -l 2048MB test.txt
```

```
sysadmin@Ubuntu2404:~$ fallocate -l 2048MB test.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.0G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 14:59 test.txt
sysadmin@Ubuntu2404:~$
```

Using the fallocate command

2. Using the truncate command

Create a test.txt file with a size of 2 GB using the command below:

```
truncate -s 2048MB test.txt
```

```
sysadmin@Ubuntu2404:~$ truncate -s 2048MB test.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.0G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 15:00 test.txt
sysadmin@Ubuntu2404:~$
```

Using the truncate command

3. Using the dd command

To produce a test.txt file that is 2 GB in size, run the command below:

```
dd if=/dev/zero of=test.txt bs=1M count=2048MB
```

```
sysadmin@Ubuntu2404:~$ dd if=/dev/zero of=test.txt bs=1M count=2048MB
1953+1 records in
1953+1 records out
2048000000 bytes (2.0 GB, 1.9 GiB) copied, 1.88197 s, 1.1 GB/s
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.0G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 15:02 test.txt
sysadmin@Ubuntu2404:~$
```

Using the dd command

4. Using the head command

Use the command below to generate a test.txt file of size 2 GB:

```
head --bytes 2048MB /dev/zero > test.txt
```

```
sysadmin@Ubuntu2404:~$ head --bytes 2048MB /dev/zero > test.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.0G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 15:03 test.txt
sysadmin@Ubuntu2404:~$
```

Using the head command

5. Using the tail command

Utilize the following command to generate a 2 GB test.txt file:

```
tail --bytes 2048MB /dev/zero > test.txt
```

```
sysadmin@Ubuntu2404:~$ tail --bytes 2048MB /dev/zero > test.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.0G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 15:04 test.txt
sysadmin@Ubuntu2404:~$
```


Using the tail command

6. Using Perl commands

Below is the command to create a 2 GB test.txt file (the number 2147483648 comes from 2048x1024x1024):

```
perl -e 'print '0' x 2147483648' > test.txt
```

```
sysadmin@Ubuntu2404:~$ perl -e 'print '0' x 2147483648' > test.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.1G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 15:07 test.txt
sysadmin@Ubuntu2404:~$
```




Using the Perl command

7. Using the base64 command

Create a 2 GB test.tx file, followed by (the number 2147483648 comes from 2048x1024x1024):

```
base64 /dev/urandom | head -c 2147483648 > test.txt
```

```
sysadmin@Ubuntu2404:~$ base64 /dev/urandom | head -c 2147483648 > test.txt
sysadmin@Ubuntu2404:~$
sysadmin@Ubuntu2404:~$ ls -lh
total 2.1G
-rw-rw-r-- 1 sysadmin sysadmin 2.0G Aug 14 15:09 test.txt
sysadmin@Ubuntu2404:~$
```



Using the base64 command

Note

To get quick results when creating a file of a certain size, you can use the truncate or fallocate command.

References

baeldung.com
tutorialspoint.com
ostechnix.com
unix.stackexchange.com
stackoverflow.com