

# How to use Wget to download files on Linux

If you know the direct download link of the file you want to download, you can download it from the console with the help of the wget command without using any additional programs or a browser.

GNU/Linux has many practical uses. You can easily process all your transactions through Terminal. If you have read or watched Linux related video tutorials, you must have come across the wget command. It is very easy to use and works by taking parameters.

For example, if you know the direct download link of the file you want to download, you can download it from the console with the help of the wget command without using any additional programs or a browser.

Here's everything you need to know about the wget command including some practical examples.

## Quick start Guide

1. To download a single file, find the file link > apply the wget link\_download command.
2. To download multiple files, save the links you want to download in a file, and then use the -i parameter with the wget command.
3. To download a file to a custom location, create the directory where you want to save the file, then use the -P flag with the wget command and specify the full path to the desired location.
4. To specify a custom filename, create a new directory, load the file with the custom name with the wget -O parameter.
5. To resume interrupted downloads with Wget, use wget -c link\_download.
6. Limit Wget's download speed with wget --limit-rate link\_download speed.
7. To download files in the background, use the -b parameter.

## Detailed instructions

### Download a single file

This is one of the most basic uses of the wget command. The intent here is to download a single file into the system using a known destination link. The wget command used for this is:

```
wget https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
```

```
(root@kali) ~# wget https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
--2022-06-11 06:30:33-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org) ... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7740634 (7.4M) [application/x-gzip]
Saving to: 'aircrack-ng-1.7.tar.gz'

aircrack-ng-1.7.tar.gz 100%[>] 7.38M 723KB/s in 11s
2022-06-11 06:30:44 (702 KB/s) - 'aircrack-ng-1.7.tar.gz' saved [7740634/7740634]

(root@kali) ~# ls -l
total 158272
-rw-r--r-- 1 root root 7740634 May 10 20:43 aircrack-ng-1.7.tar.gz
drwxr-xr-x 2 kali kali 4096 May 17 13:26 Desktop
drwxr-xr-x 2 kali kali 4096 Dec 20 01:36 Documents
drwxr-xr-x 3 kali kali 4096 Jun 6 05:13 Downloads
```

As shown in the image, you can download the file with the wget command and find where to download it with ls -l.

## Batch download of files

Multiple files from links stored in a text document can be downloaded at once using the -i parameter with the wget command.

For example, you want to download all PDF files at a certain address at once. To do this, you need to save the download links of these PDF files in a text document. You can do this by creating a file named my\_pdfs with the vim my\_pdfs command and adding the necessary links to the file.

```
(root@kali) ~/Desktop# cat my_pdfs
https://cloud.google.com/docs/security/overview/resources/google_security_wp.pdf
https://cloud.google.com/docs/security/encryption/default-encryption/resources/encryption-whitepaper.pdf
https://cloud.google.com/docs/security/encryption-in-transit/application-layer-transport-security/resources/alts-whitepaper.pdf
https://cloud.google.com/docs/security/infrastructure/design/resources/google_infrastructure_whitepaper_fa.pdf

(root@kali) ~/Desktop#
```

Let's download the PDF formats of Google Cloud documents as an example. Save links to PDF files in a file and use the following command to download them:

```
wget -i my_pdfs
```

```
(root@kali) ~ - [~/home/kali/Desktop]
# wget -i my_pdfs
--2022-06-11 12:51:26-- https://cloud.google.com/docs/security/overview/resources/google_security_wp.pdf
Resolving cloud.google.com (cloud.google.com)... 172.217.17.238, 2a00:1450:4017:802::200e
Connecting to cloud.google.com (cloud.google.com)|172.217.17.238|:443... connect
ed.
HTTP request sent, awaiting response... 200 OK
Length: 281000 (274K) [application/pdf]
Saving to: 'google_security_wp.pdf'

google_security_wp.pdf 100%[====>] 274.41K 486KB/s in 0.6s

2022-06-11 12:51:28 (486 KB/s) - 'google_security_wp.pdf' saved [281000/281000]

--2022-06-11 12:51:28-- https://cloud.google.com/docs/security/encryption/default-encryption/resources/encryption-whitepaper.pdf
Reusing existing connection to cloud.google.com:443.
HTTP request sent, awaiting response... 200 OK
Length: 4879659 (4.7M) [application/pdf]
Saving to: 'encryption-whitepaper.pdf'

encryption-whitepaper.pdf 100%[====>] 4.65M 1.27MB/s

2022-06-11 12:51:35 (1.19 MB/s) - 'encryption-whitepaper.pdf' saved [4879659/4879659]

--2022-06-11 12:51:35-- https://cloud.google.com/docs/security/encryption-in-transit/application-layer-transport-resources/alts-whitepaper.pdf
Reusing existing connection to cloud.google.com:443.
HTTP request sent, awaiting response... 200 OK
```

After this step, you can view the downloaded files by running:

```
ls -l
```

```
(root@kali) ~ - [~/home/kali/Desktop]
# ls -l
total 6100
-rw-r--r-- 1 root root 698482 Feb 18 10:16 alts-whitepaper.pdf
-rw-r--r-- 1 root root 4879659 Feb 18 10:16 encryption-whitepaper.pdf
-rw-r--r-- 1 root root 375168 Jun 2 10:18 google_infrastructure_whitepaper_fa.pdf
-rw-r--r-- 1 root root 281000 Jun 6 11:10 google_security_wp.pdf
```

## Download by specifying a custom location

If you want the file to download to a special location on your system, you need to use the `-P` flag with the command:

```
wget -P /path/to/dir filelink
```

You can see this in the example below. Likewise, try downloading the file `aircrack-ng` and this time specifying an address. For example, you can create a folder `Myfile` to store downloaded files.

```
wget -P Myfile https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
```

```
(kali@code)-[~/Desktop]
└─$ wget -P Myfile https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
--2022-06-11 13:02:42-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org) ... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443..
. connected.
HTTP request sent, awaiting response ... 200 OK
Length: 7740634 (7.4M) [application/x-gzip]
Saving to: 'Myfile/aircrack-ng-1.7.tar.gz'

aircrack-ng-1.7.tar.g 100%[====>] 7.38M 996KB/s in 6.5s

2022-06-11 13:02:49 (1.13 MB/s) - 'Myfile/aircrack-ng-1.7.tar.gz' saved [7740634/7740634]

(kali@code)-[~/Desktop]
└─$ cd Myfile

(kali@code)-[~/Desktop/Myfile]
└─$
```

To download the file to the desired location, you must specify the full path to the directory. You can also run the following `ls -l` command to make sure the file is actually where you want it to be.

## Download by specifying a custom filename

With the `wget -O` parameter, you can name the file you want to download and download it to any location you want. To avoid confusion, create a new `oParameter` folder and try to download your aircrack-ng file to this folder by giving it the name you want, in this case aircrack.

```
wget -O oParameter/aircrack https://download.aircrack-ng.org/aircrack-ng-1.7.tar
```

```
(kali@code)-[~/Desktop]
└─$ wget -O oParameter/aircrack https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
--2022-06-11 13:12:18-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org) ... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443... connected.
HTTP request sent, awaiting response ... 200 OK
Length: 7740634 (7.4M) [application/x-gzip]
Saving to: 'oParameter/aircrack'

oParameter/aircrack 100%[====>] 7.38M 1.05MB/s in 6.7s

2022-06-11 13:12:25 (1.11 MB/s) - 'oParameter/aircrack' saved [7740634/7740634]

(kali@code)-[~/Desktop]
└─$ cd oParameter

(kali@code)-[~/Desktop/oParameter]
└─$ ls -l
```

After Wget has finished downloading the file named "aircrack" and saving it to the `/oParameter` directory, you can confirm this with the command `ls -l`.

Also, if you want to change the name of the downloaded file without changing its location, just specify the new filename without specifying any location. For example, you can change the name of the file to download using the `wget new_name file_link` command. Since you don't specify any location, it will automatically download at your current working directory.

```
wget myfilename https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
```

```
(kali@code)-[~/Desktop]
└─$ wget myfilename https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
--2022-06-11 13:19:07-- http://myfilename/
Resolving myfilename (myfilename)... failed: Name or service not known.
wget: unable to resolve host address 'myfilename'
--2022-06-11 13:19:08-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org)... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7740634 (7.4M) [application/x-gzip]
Saving to: 'aircrack-ng-1.7.tar.gz'

aircrack-ng-1.7.tar.gz 100%[=====] 7.38M 747KB/s in 10s
2022-06-11 13:19:18 (758 KB/s) - 'aircrack-ng-1.7.tar.gz' saved [7740634/7740634]

FINISHED --2022-06-11 13:19:18--
Total wall clock time: 11s
Downloaded: 1 files, 7.4M in 10s (758 KB/s)

(kali@code)-[~/Desktop]
└─$ ls -l
total 7568
-rw-r--r-- 1 kali kali 7740634 May 10 20:43 aircrack-ng-1.7.tar.gz
drwxr-xr-x 2 kali kali 4096 Jun 11 13:03 myfiles

TipsMake
```

## Resume interrupted downloads with Wget

Failed download is one of the most common problems when downloading large files. In such cases, you can continue the download and get the rest of the file.

You can use the `-c` parameter with the `wget` command to re-download the interrupted file. Therefore, by using `wget -c download_link`, if the file is not completely downloaded, you have the opportunity to continue from where it left off instead of re-downloading it from the beginning. This is very practical, especially for large files.

To better understand this, first create a folder called `Resume` on the desktop. Access this folder using Terminal with the `cd` command and try to download the aircrack file you used in the other examples here. Then, interrupt this download with the keyboard combination `Ctrl + Z`.

```
(kali@code)-[~/Desktop]
└─$ mkdir Resume

(kali@code)-[~/Desktop]
└─$ cd Resume

(kali@code)-[~/Desktop/Resume]
└─$ wget https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
--2022-06-11 13:29:50-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org)... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7740634 (7.4M) [application/x-gzip]
Saving to: 'aircrack-ng-1.7.tar.gz'

aircrack-ng-1.7.tar.gz 19%[=====]
Z
zsh: suspended wget https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz

(kali@code)-[~/Desktop/Resume]
└─$ ls -l
total 1608

TipsMake
```

As you can see, 19% of the files have been downloaded, occupying 1645946 bytes. Now use the `-c` parameter in the same way and try to resume the download.

```
(kali@code)-[~/Desktop/Resume]
└─$ wget -c https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz 1
--2022-06-11 13:34:03-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org)... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443 ... conne
cted.
HTTP request sent, awaiting response... 206 Partial Content
Length: 7740634 (7.4M), 6094688 (5.8M) remaining [application/x-gzip]
Saving to: 'aircrack-ng-1.7.tar.gz'

aircrack-ng-1.7.tar.gz 100%[+++++] 7.38M 735KB/s in 8.6s
2022-06-11 13:34:12 (691 KB/s) - 'aircrack-ng-1.7.tar.gz' saved [7740634/7740634]

(kali@code)-[~/Desktop/Resume]
└─$ ls -l
total 7560
```

As you can see, the download is complete. Thus, there is no need to delete the file and re-download it from the beginning. This is just a small file for example. But for very large files, you can save time by using Wget.

## Wget download speed limit

If you want, you can limit the download speed for the file. To set this limit, you can use the following command:

```
wget --limit-rate 300K https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
```

This command will limit the download speed to 300KB per second.

```
(kali@code)-[~/Desktop]
└─$ wget --limit-rate 300K https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz 1
--2022-06-11 13:42:11-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org)... 213.186.33.69
Connecting to download.aircrack-ng.org (download.aircrack-ng.org)|213.186.33.69|:443 ... conne
cted.
HTTP request sent, awaiting response... 200 OK
Length: 7740634 (7.4M) [application/x-gzip]
Saving to: 'aircrack-ng-1.7.tar.gz'
```

You can try different speeds by varying the value of 300K.

## Download files in the background

You can download files in the background with the -b parameter. This is most useful when you are busy with many tasks. Also, if you want to find out the result of the download, you can simply check the wget-log file located in the same location as the downloaded file.

```
(kali@code)-[~/Desktop]
└─$ wget -b https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Continuing in background, pid 124816.
Output will be written to 'wget-log'.

(kali@code)-[~/Desktop]
└─$ cat wget-log
--2022-06-11 14:41:29-- https://download.aircrack-ng.org/aircrack-ng-1.7.tar.gz
Resolving download.aircrack-ng.org (download.aircrack-ng.org)... 213.186.33.69
```

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