

Demonstration

How to verify that the file downloaded from web is not corrupted?

Most sites provide downloads of either software or source. Once the download is complete, you may cross check the download is correct and not corrupted.

Sites provide feature called checksum. Site has counted the checksum with selected encryption algorithm i.e. md5, sha26, etc and provided the checksum result separately.

Once download finishes, you can run local utilities to find the checksum of downloaded file.

Ideally the local resulting checksum as per selected algorithm shall match with provided by the site.

If so, you can confirm that the file is not corrupted.

To demonstrate the example, I have chosen to download famous IDE and validate downloads.

Know that wget is a http command line client. It does naive activity as your firefox, safari or chrome may be doing.

Download the zip file:

wget <https://download.jetbrains.com/idea/ideaIC-2020.2.3.win.zip>

Download the checksum value:

```
wget https://download.jetbrains.com/idea/ideaIC-  
2020.2.3.win.zip.sha256?_ga=2.75943445.1008361575.1606023864-469026589.1606023864
```

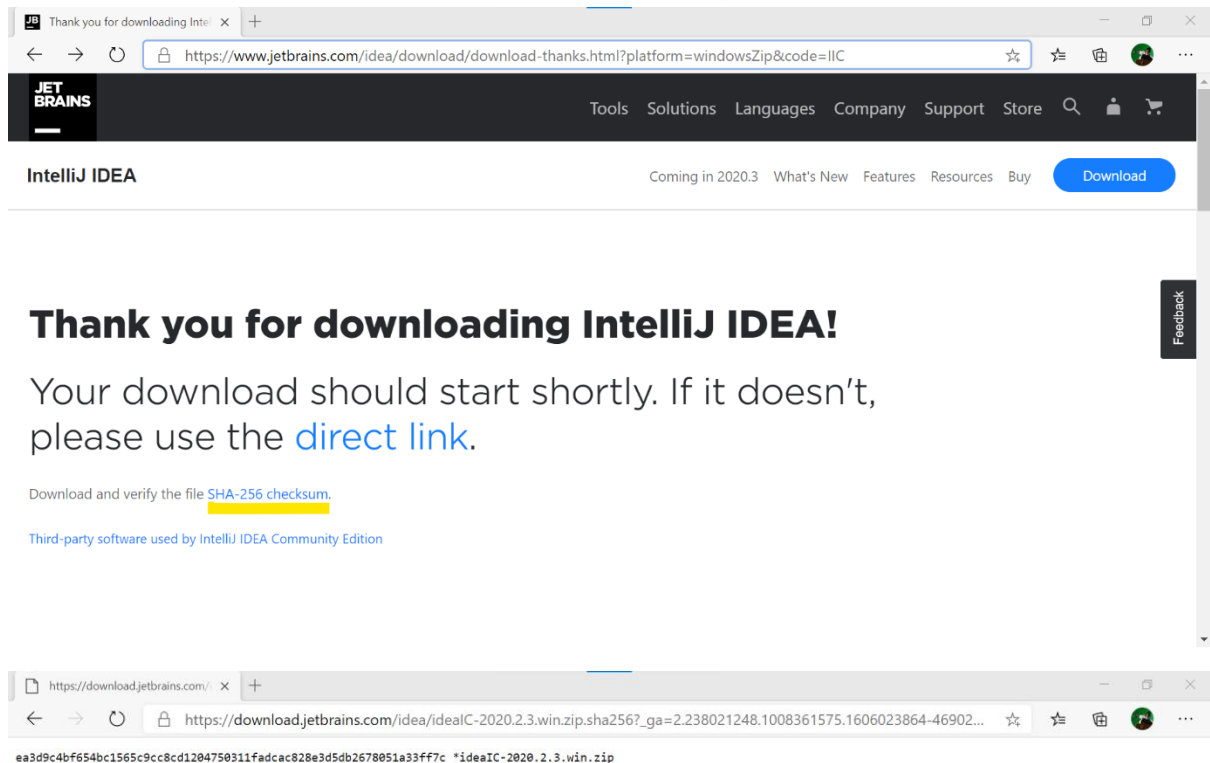
Display the checksum value:

```
cat ideaIC-2020.2.3.win.zip.sha256?_ga=2.75943445.1008361575.1606023864-  
469026589.1606023864
```

Generate the checksum value of downloaded zip file:

sha256sum ideaIC-2020.2.3.win.zip

Note that both checksum hex values are matching (highlighted in yellow text). Hence, we can judge that the download is correct.



Below execution has been carried out on Ubuntu app with Windows Subsystem for Linux enabled on MS Windows 10.

```
jgandya@JigarPandyahPL:~$ wget https://download.jetbrains.com/idea/ideaIC-2020.2.3.win.zip
--2020-11-22 13:53:36-- https://download.jetbrains.com/idea/ideaIC-2020.2.3.win.zip
Resolving download.jetbrains.com (download.jetbrains.com)... 2a05:d018:93b:d102:28b3:44c0:d031:202f, 2a05:d018:93b:d103:fd34:f238:7a2a:9b39, 52.50.241.213, ...
Connecting to download.jetbrains.com (download.jetbrains.com)|2a05:d018:93b:d102:28b3:44c0:d031:202f|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://download-cf.jetbrains.com/idea/ideaIC-2020.2.3.win.zip [following]
--2020-11-22 13:53:37-- https://download-cf.jetbrains.com/idea/ideaIC-2020.2.3.win.zip
Resolving download-cf.jetbrains.com (download-cf.jetbrains.com)... 2600:9000:21f0:a200:0:5511:db80:93a1, 2600:9000:21f0:4a00:0:5511:db80:93a1, 2600:9000:21f0:8000:0:5511:db80:93a1, ...
Connecting to download-cf.jetbrains.com (download-cf.jetbrains.com)|2600:9000:21f0:a200:0:5511:db80:93a1|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 675182337 (644M) [binary/octet-stream]
Saving to: 'ideaIC-2020.2.3.win.zip'

ideaIC-2020.2.3.win.zip      100%[=====] 643.90M  16.2MB/s   in 39s

2020-11-22 13:54:16 (16.4 MB/s) - 'ideaIC-2020.2.3.win.zip' saved [675182337/675182337]

jgandya@JigarPandyahPL:~$ wget https://download.jetbrains.com/idea/ideaIC-2020.2.3.win.zip.sha256?_ga=2.242207490.1008361575.1606023864-469026589.1606023864
--2020-11-22 13:55:05-- https://download.jetbrains.com/idea/ideaIC-2020.2.3.win.zip.sha256?_ga=2.242207490.1008361575.1606023864-469026589.1606023864
Resolving download.jetbrains.com (download.jetbrains.com)... 2a05:d018:93b:d102:28b3:44c0:d031:202f, 2a05:d018:93b:d103:fd34:f238:7a2a:9b39, 54.77.218.77, ...
Connecting to download.jetbrains.com (download.jetbrains.com)|2a05:d018:93b:d102:28b3:44c0:d031:202f|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 90 [text/plain]
Saving to: 'ideaIC-2020.2.3.win.zip.sha256?_ga=2.242207490.1008361575.1606023864-469026589.1606023864'

ideaIC-2020.2.3.win.zip.sha256?_ga=2.242207490.1008361575.1606023864-469026589.1606023864  90%[=====] 90 --.-KB/s   in 0s

2020-11-22 13:55:05 (1.83 MB/s) - 'ideaIC-2020.2.3.win.zip.sha256?_ga=2.242207490.1008361575.1606023864-469026589.1606023864' saved [90/90]

jgandya@JigarPandyahPL:~$ cat ideaIC-2020.2.3.win.zip.sha256?_ga=2.242207490.1008361575.1606023864-469026589.1606023864
aa3d9c4bf654bc1565c9cc8cd1204750311fadcae828e3d5db2678051a33ff7c *ideaIC-2020.2.3.win.zip
jgandya@JigarPandyahPL:~$ sha256sum ideaIC-2020.2.3.win.zip
aa3d9c4bf654bc1565c9cc8cd1204750311fadcae828e3d5db2678051a33ff7c ideaIC-2020.2.3.win.zip
jgandya@JigarPandyahPL:~$
```

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