



Arch Linux • System Administration

Setup Pacman Mirrors on Arch Linux

1 year ago • by Shahriar Shovon

In this article I will show you how to setup Pacman mirrors on Arch Linux. Let's get started.

What is an Arch Linux Mirror?

Like all the other Linux distributions such as Ubuntu, Arch Linux also has an official package repository. It is hosted on the official Arch Linux server. To save bandwidth and reduce the cost, to increase the download speed and response time, the official package repository is copied to different server in different parts of the world. So people close to certain

geographical location can use that server instead the official Arch Linux server as they are synced with the official Arch Linux package repository.

Each of these servers that keeps a copy of the official Arch Linux package repository is called a mirror.

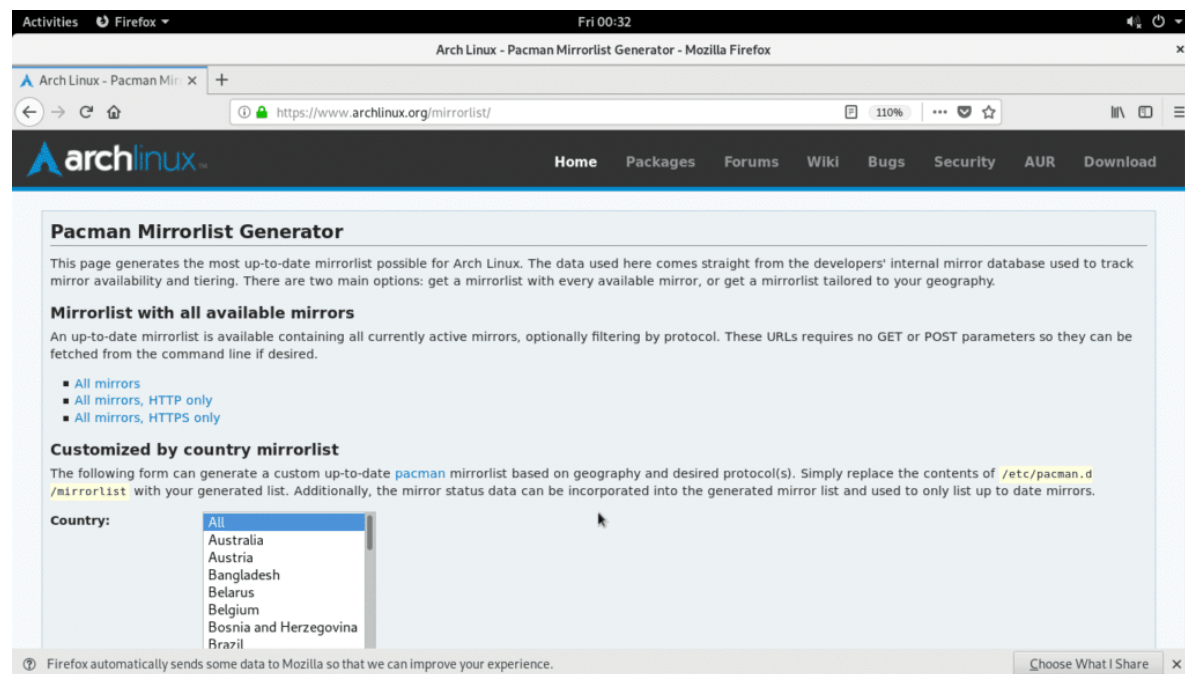
The Pacman Mirror Configuration File

Arch Linux package manager Pacman keeps it's mirror list in **/etc/pacman.d/mirrorlist** file. To change Pacman mirrors, you must modify this file.

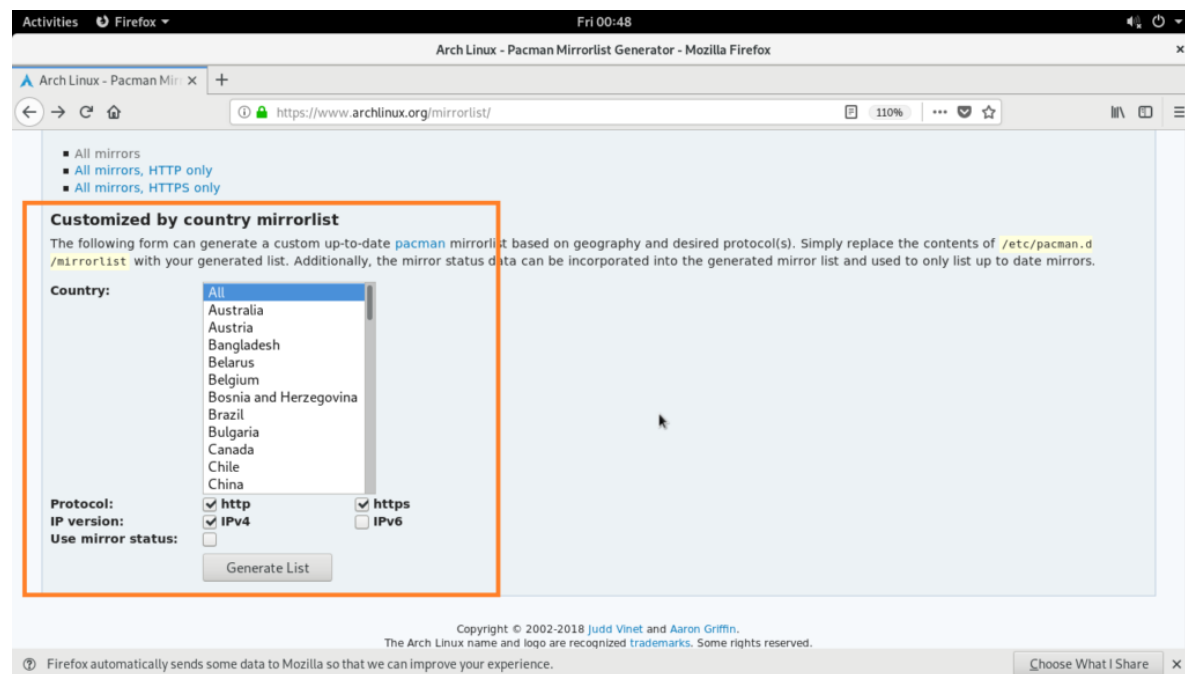
Generating a mirrorlist File for Specific Geographical Location

You can generate a **mirrorlist** file for specific geographical location using the official Arch Linux website.

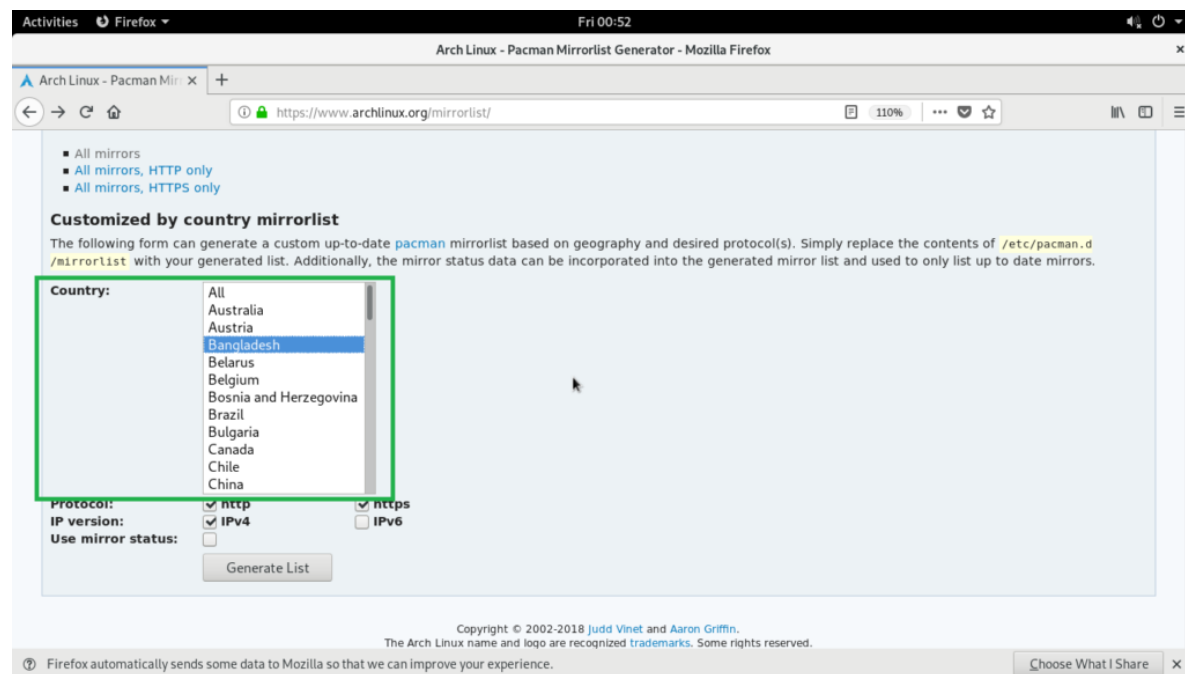
Go to <https://www.archlinux.org/mirrorlist/> and you should see the following page as shown in the screenshot below.



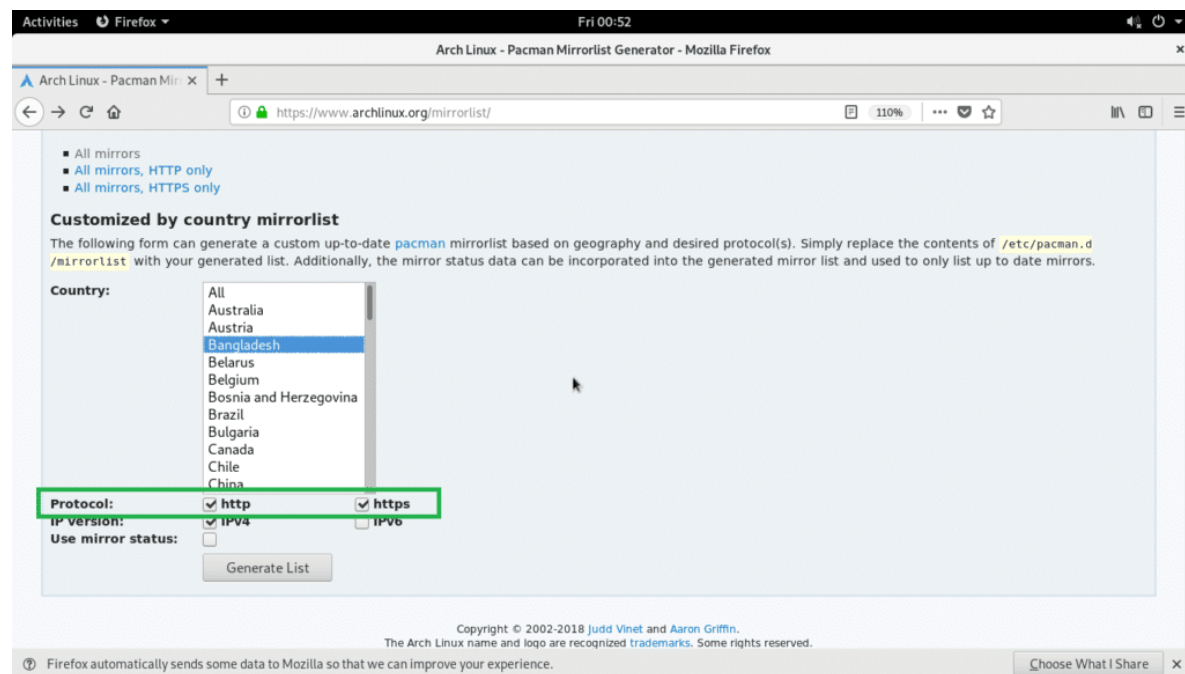
You can also use the **mirrorlist** generator wizard as marked in the screenshot below.



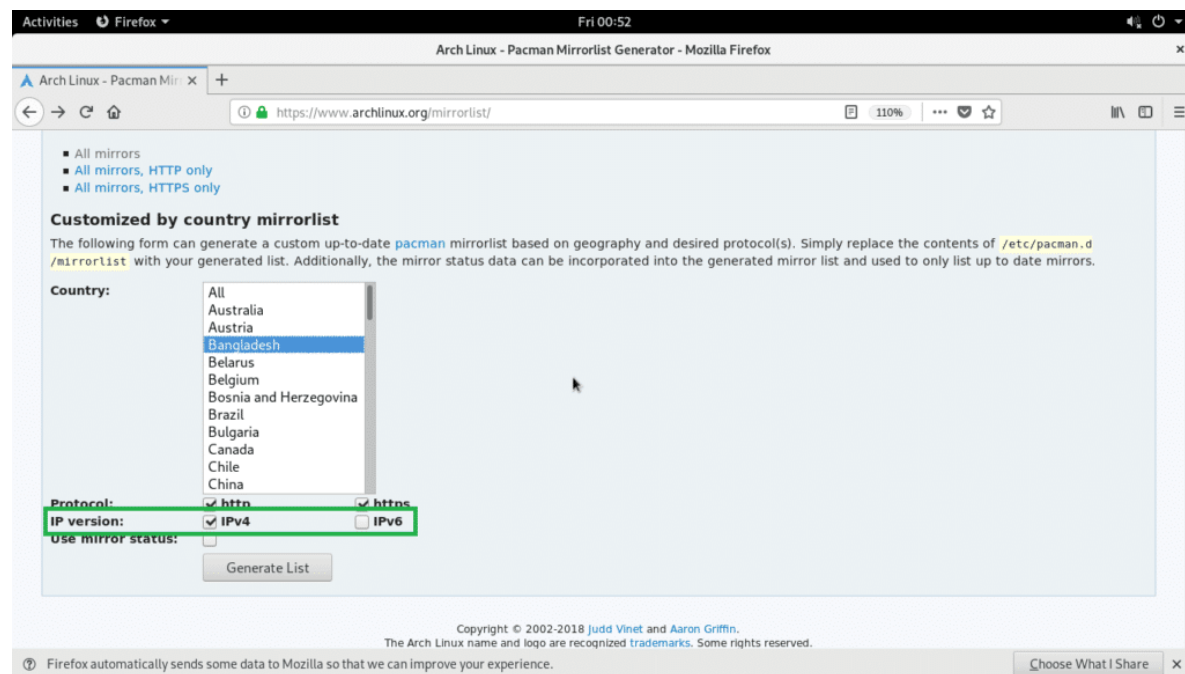
First select your country.



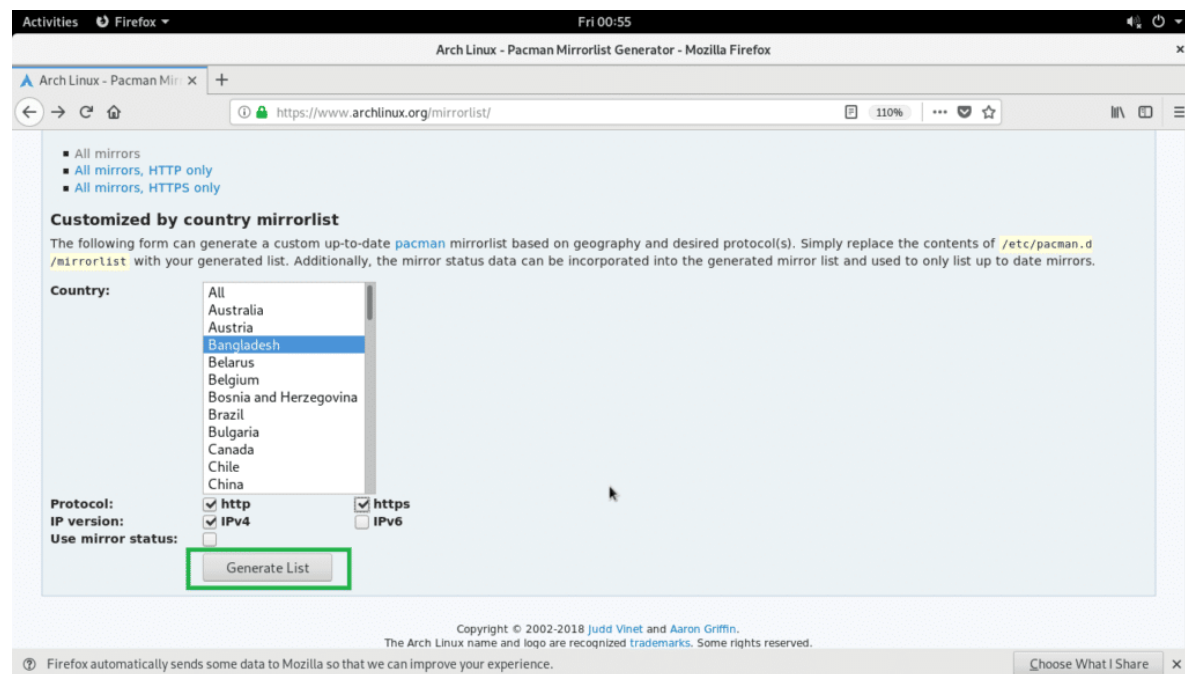
Then check either **http** or **https** or both (**http** and **https**) in the **Protocol** section depending on your need.



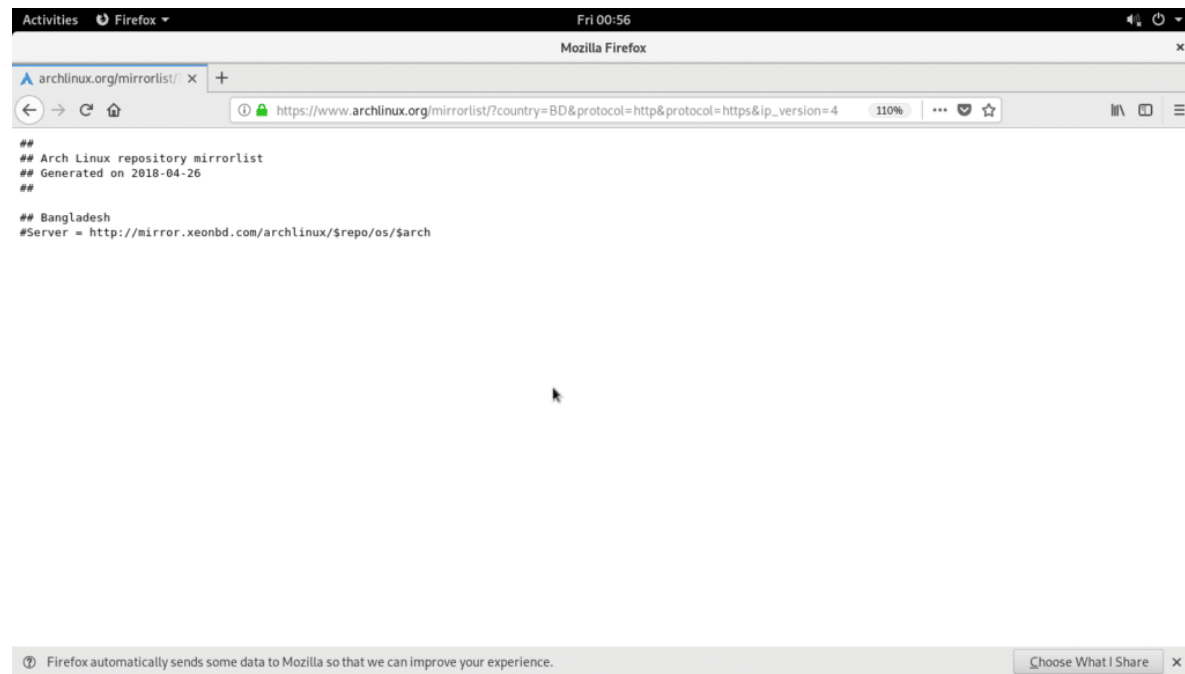
Then select the **IP version**. **IPv4** is available in every country, **IPv6** may not be available. You may select both.



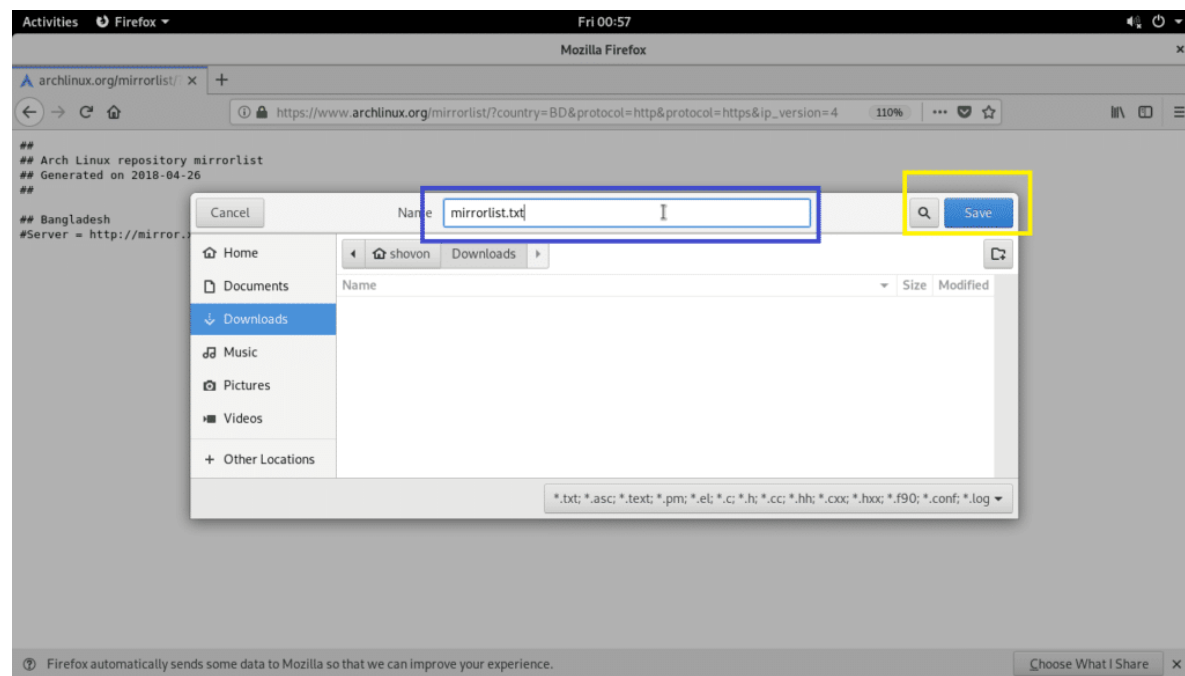
Finally click on **Generate List** button.



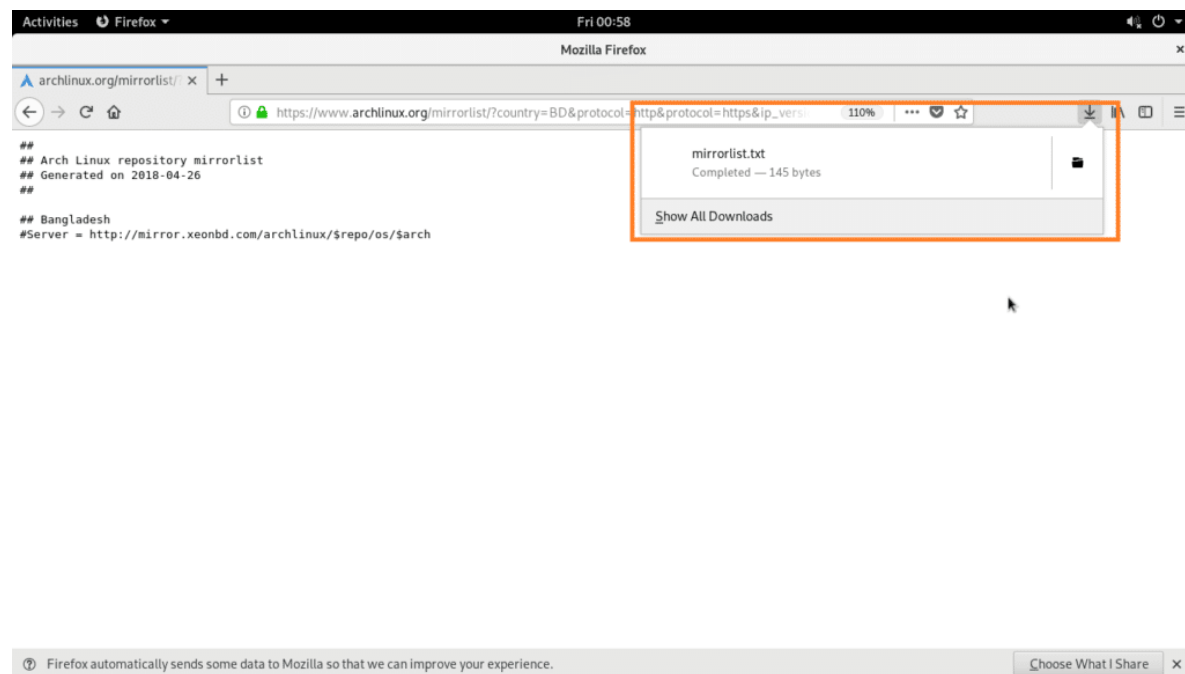
A **mirrorlist** file should be generate as you can see in the screenshot below.



Now press **<Ctrl> + s** and save the file as **mirrorlist.txt**



It is saved.

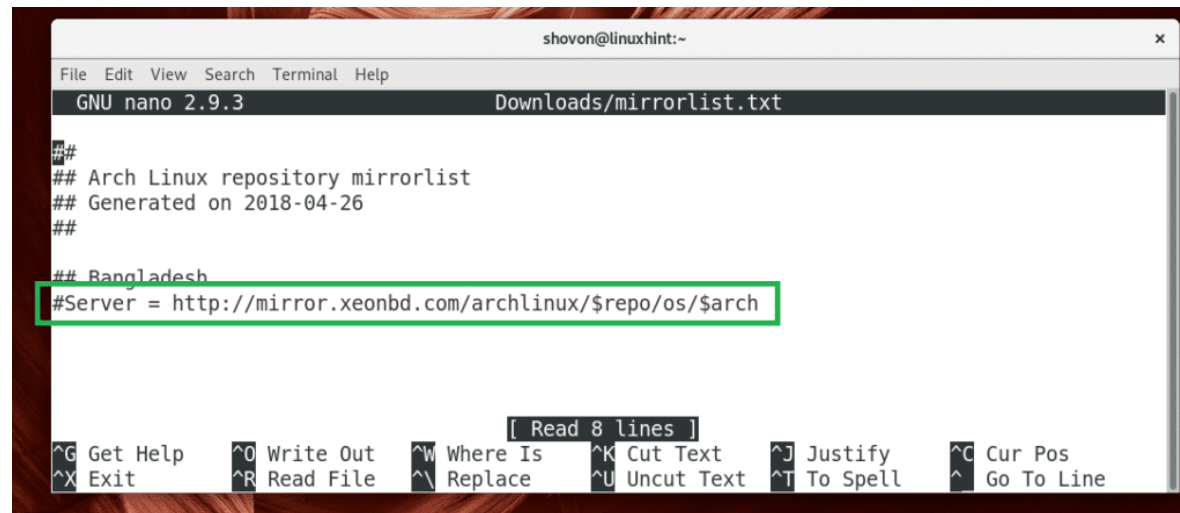


Now open the file with any text editor.

```
$ nano ~/Downloads/mirrorlist.txt
```

Remove the hash (#) sign from the line that starts with **Server =**

NOTE: If you have multiple lines starting with **Server =** , then remove the hash (#) sign from the lines that you want to add as Pacman mirror, leave the rests as it is.

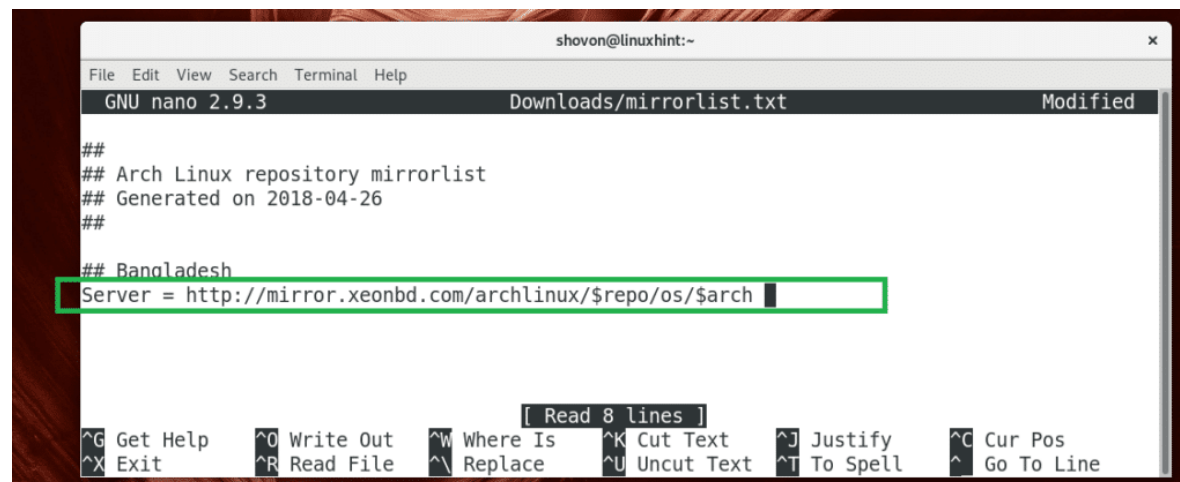


A screenshot of a terminal window titled 'shovon@linuxhint:~'. Inside, the GNU nano 2.9.3 editor is open, editing 'Downloads/mirrorlist.txt'. The file content is as follows:

```
##  
## Arch Linux repository mirrorlist  
## Generated on 2018-04-26  
##  
## Bangladesh  
#Server = http://mirror.xeonbd.com/archlinux/$repo/os/$arch
```

The line '#Server = http://mirror.xeonbd.com/archlinux/\$repo/os/\$arch' is highlighted with a green box. The bottom status bar shows '[Read 8 lines]' and various keyboard shortcuts like '^G Get Help', '^O Write Out', '^W Where Is', '^K Cut Text', '^J Justify', '^C Cur Pos', '^X Exit', '^R Read File', '^_ Replace', '^U Uncut Text', '^T To Spell', and '^_ Go To Line'.

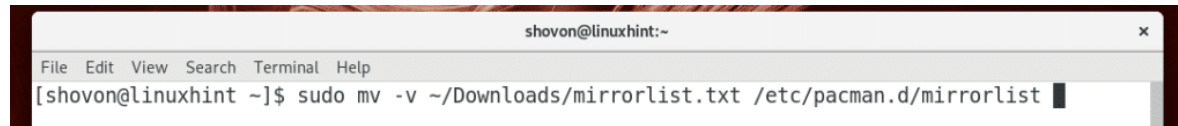
Once you're done, save the file.



A second screenshot of the same nano editor window. The content is identical to the first, but now a cursor is visible at the end of the highlighted line: '#Server = http://mirror.xeonbd.com/archlinux/\$repo/os/\$arch'.

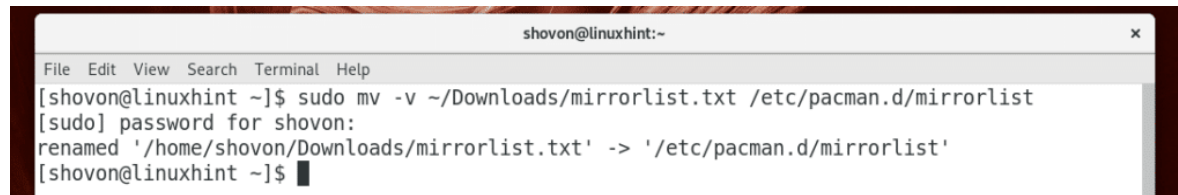
Now replace **/etc/pacman.d/mirrorlist** with this file with the following command:

```
$ sudo mv -v ~/Downloads/mirrorlist.txt /etc/pacman.d/mirrorlist
```

A terminal window titled 'shovon@linuxhint:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[shovon@linuxhint ~]\$ sudo mv -v ~/Downloads/mirrorlist.txt /etc/pacman.d/mirrorlist' is entered and executed, with a cursor at the end of the line.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo mv -v ~/Downloads/mirrorlist.txt /etc/pacman.d/mirrorlist
```

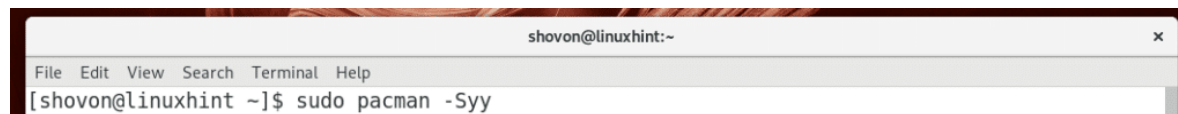
The file is moved.

A terminal window titled 'shovon@linuxhint:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[shovon@linuxhint ~]\$ sudo mv -v ~/Downloads/mirrorlist.txt /etc/pacman.d/mirrorlist' is entered. The prompt changes to '[sudo] password for shovon:', followed by the confirmation 'renamed '/home/shovon/Downloads/mirrorlist.txt' -> '/etc/pacman.d/mirrorlist''. The command is then executed, and the prompt returns to '[shovon@linuxhint ~]\$'.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo mv -v ~/Downloads/mirrorlist.txt /etc/pacman.d/mirrorlist  
[sudo] password for shovon:  
renamed '/home/shovon/Downloads/mirrorlist.txt' -> '/etc/pacman.d/mirrorlist'  
[shovon@linuxhint ~]$
```

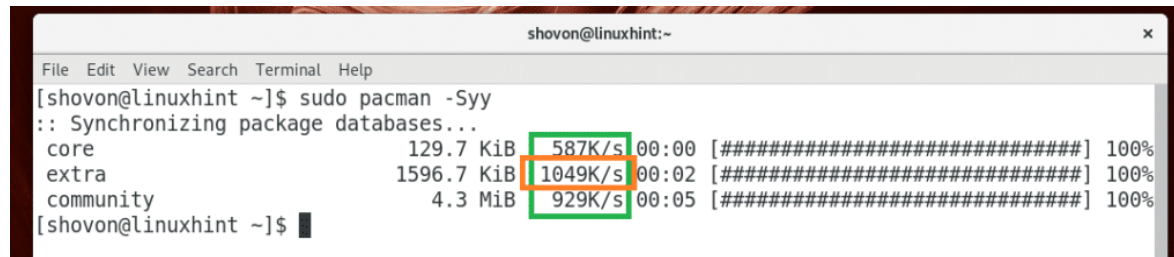
Now update the Pacman package repository cache with the following command:

```
$ sudo pacman -Syy
```

A terminal window titled 'shovon@linuxhint:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[shovon@linuxhint ~]\$ sudo pacman -Syy' is entered and executed.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo pacman -Syy
```

The Pacman package repository cache should be updated and as you can see from the marked section of the screenshot below, I am getting 10 times more speed than usual. FYI my usual download speed is 128 KBps.

A terminal window titled 'shovon@linuxhint:~' showing the output of 'sudo pacman -Syy'. The output lists three repositories: 'core' (129.7 KiB, 587K/s), 'extra' (1596.7 KiB, 1049K/s), and 'community' (4.3 MiB, 929K/s). The speed for 'extra' is highlighted with a red box. The progress bars for all repositories are at 100%.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo pacman -Syy  
:: Synchronizing package databases...  
core               129.7 KiB  587K/s 00:00 [#####] 100%  
extra             1596.7 KiB 1049K/s 00:02 [#####] 100%  
community          4.3 MiB   929K/s 00:05 [#####] 100%  
[shovon@linuxhint ~]$
```

Finding the Fastest Arch Linux Mirror

At times just setting a geographically closer Arch Linux mirror is not enough. So Before you set an Arch Linux mirror, you should check and find out the fastest mirror on your current ISPs network. Thanks to Arch Linux, Pacman has a built in utility **rankmirrors** to test and find the fastest mirror for you.

First run the following command to download a **mirrorlist** file that includes all the available Arch Linux mirrors:

```
$ curl -o ~/Downloads/mirrorlist
```

<https://www.archlinux.org/mirrorlist/all/>

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ curl -o ~/Downloads/mirrorlist https://www.archlinux.org/mirrorlist/all/
```

The file should be saved in the **Downloads/mirrorlist** on your user's HOME directory.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ curl -o ~/Downloads/mirrorlist https://www.archlinux.org/mirrorlist/all/  
% Total % Received % Xferd Average Speed Time Time Time Current  
Dload Upload Total Spent Left Speed  
100 25885 100 25885 0 0 7130 0 0:00:03 0:00:03 --:--:-- 7128  
[shovon@linuxhint ~]$
```

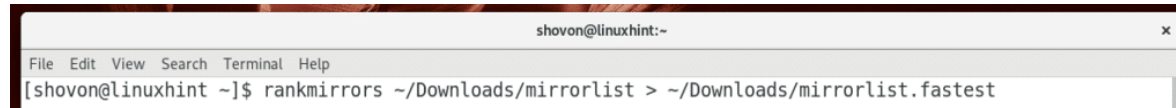
Now run the following command to uncomment all the mirror lines:

```
$ sed -i 's/#S/S/g' ~/Downloads/mirrorlist
```

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sed -i 's/#S/S/g' ~/Downloads/mirrorlist
```

Now start the check with the following command:

```
$ rankmirrors ~/Downloads/mirrorlist > ~/Downloads/mirrorlist.fastest
```

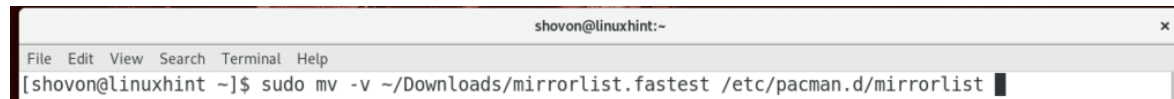
A terminal window titled 'shovon@linuxhint:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[shovon@linuxhint ~]\$ rankmirrors ~/Downloads/mirrorlist > ~/Downloads/mirrorlist.fastest' is entered and executed.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ rankmirrors ~/Downloads/mirrorlist > ~/Downloads/mirrorlist.fastest
```

Once the check is complete, the mirrors will be sorted in descending order depending on the download speed in **~/Downloads/mirrorlist.fastest** file. It should take a long time to check all the mirrors if your internet connection is slow.

Now replace **/etc/pacman.d/mirrorlist** file with the **~/Downloads/mirrorlist.fastest** file with the following command:

```
$ sudo mv -v ~/Downloads/mirrorlist.fastest /etc/pacman.d/mirrorlist
```

A terminal window titled 'shovon@linuxhint:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[shovon@linuxhint ~]\$ sudo mv -v ~/Downloads/mirrorlist.fastest /etc/pacman.d/mirrorlist' is entered and executed.

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo mv -v ~/Downloads/mirrorlist.fastest /etc/pacman.d/mirrorlist
```

File replaced.


```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo mv -v ~/Downloads/mirrorlist.fastest /etc/pacman.d/mirrorlist  
[sudo] password for shovon:  
renamed '/home/shovon/Downloads/mirrorlist.fastest' -> '/etc/pacman.d/mirrorlist'  
[shovon@linuxhint ~]$
```

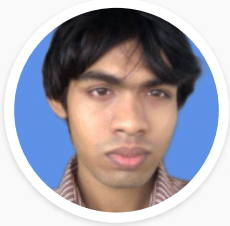
Now update the Pacman package repository cache with the following command:

```
$ sudo pacman -Syy
```

```
shovon@linuxhint:~  
File Edit View Search Terminal Help  
[shovon@linuxhint ~]$ sudo pacman -Syy  
:: Synchronizing package databases...  
core 129.7 KiB 1247K/s 00:00 [#####] 100%  
extra 1596.7 KiB 1103K/s 00:01 [#####] 100%  
community 4.3 MiB 943K/s 00:05 [#####] 100%  
[shovon@linuxhint ~]$
```

That's how you setup Pacman mirrors on Arch Linux. Thanks for reading this article.

ABOUT THE AUTHOR



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Freelancer & Linux System Administrator. Also loves Web API development with Node.js and JavaScript. I was born in Bangladesh. I am currently studying Electronics and Communication Engineering at Khulna University of Engineering & Technology (KUET), one of the demanding public engineering universities of Bangladesh.

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