


18 Tar Command Examples in Linux

by Ravi Saive | Published: September 15, 2012 | Last Updated: September 18, 2017

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The Linux “**tar**” stands for tape archive, which is used by large number of **Linux/Unix** system administrators to deal with tape drives backup. The tar command used to rip a collection of files and directories into highly compressed archive file commonly called **tarball** or **tar**, **gzip** and **bzip** in **Linux**. The tar is most widely used command to create compressed archive files and that can be moved easily from one disk to another disk or machine to machine.

In this article we will be going to review and discuss various **tar command examples** including how to create archive files using (**tar**, **tar.gz** and **tar.bz2**) compression, how to extract archive file, extract a single file, view content of file, verify a file, add files or directories to archive file, estimate the size of tar archive file, etc.

The main purpose of this guide is to provide various **tar command examples** that might be helpful for you to understand and become expert in tar archive manipulation.

1. Create tar Archive File

The below example command will create a **tar** archive file **tecmint-14-09-12.tar** for a directory **/home/tecmint** in current working directory. See the example command in action.

```
# tar -cvf tecmint-14-09-12.tar /home/tecmint/
/home/tecmint/
/home/tecmint/cleanfiles.sh
/home/tecmint/openvpn-2.1.4.tar.gz
/home/tecmint/tecmint-14-09-12.tar
/home/tecmint/phpmyadmin-2.11.11.3-1.el5.rf.noarch.rpm
/home/tecmint/rpmsforge-release-0.5.2-2.el5.rf.i386.rpm
```

Let’s discuss each option that we have used in the above command for creating a tar archive file.

- **c** – Creates a new .tar archive file.
- **v** – Verbosely show the .tar file progress.
- **f** – File name type of the archive file.

2. Create tar.gz Archive File

To create a compressed **gzip** archive file we use the option as **z**. For example the below command will create a compressed **MyImages-14-09-12.tar.gz** file for the directory **/home/MyImages**. (Note : tar.gz and tgz both are similar).

```
# tar cvzf MyImages-14-09-12.tar.gz /home/MyImages
OR
# tar cvzf MyImages-14-09-12.tgz /home/MyImages
/home/MyImages/
/home/MyImages/Sara-Khan-and-model-Priyanka-Shah.jpg
/home/MyImages/RobertKristenviolent101201.jpg
/home/MyImages/Justintimerlake101125.jpg
/home/MyImages/Mileyphoto101203.jpg
/home/MyImages/JenniferRobert101130.jpg
/home/MyImages/katrinabarbiedoll1231110.jpg
/home/MyImages/the-japanese-wife-press-conference.jpg
/home/MyImages/ReesewitherspoonCIA101202.jpg
/home/MyImages/yanaguptabaresf231110.jpg
```

3. Create tar.bz2 Archive File

The **bz2** feature compress and create archive file less than the size of the **gzip**. The **bz2** compression takes more time to compress and decompress files as compared to **gzip** which takes less time. To create highly compressed tar file we use option **j**. The following example command will create a **Phpfiles-org.tar.bz2** file for a directory **/home/php**. (Note: **tar.bz2** and **tbz** is similar as **tb2**).

```
# tar cvfj Phpfiles-org.tar.bz2 /home/php
OR
# tar cvfj Phpfiles-org.tar.tbz /home/php
OR
# tar cvfj Phpfiles-org.tar.tb2 /home/php
/home/php/
/home/php/iframe_ew.php
/home/php/videos_all.php
/home/php/rss.php
/home/php/index.php
/home/php/vendor.php
/home/php/video_title.php
/home/php/report.php
/home/php/object.html
/home/php/video.php
```

4. Untar tar Archive File

To untar or extract a tar file, just issue following command using option **x** (**extract**). For example the below command will untar the file **public_html-14-09-12.tar** in present working directory. If you want to untar in a different directory then use option as **-C** (specified directory).

```
## Untar files in Current Directory ##
# tar -xvf public_html-14-09-12.tar
## Untar files in specified Directory ##
# tar -xvf public_html-14-09-12.tar -C /home/public_html/videos/
/home/public_html/videos/
/home/public_html/videos/views.php
/home/public_html/videos/index.php
/home/public_html/videos/logout.php
/home/public_html/videos/all_categories.php
/home/public_html/videos/feeds.xml
```

5. Uncompress tar.gz Archive File

To Uncompress **tar.gz** archive file, just run following command. If would like to untar in different directory just use option **-C** and the path of the directory, like we shown in the above example.

```
# tar -xvf thumbnails-14-09-12.tar.gz
/home/public_html/videos/thumbnails/
/home/public_html/videos/thumbnails/katdeepika231110.jpg
/home/public_html/videos/thumbnails/katrinabarbiedoll231110.jpg
/home/public_html/videos/thumbnails/onceuponatime101125.jpg
/home/public_html/videos/thumbnails/playbutton.png
/home/public_html/videos/thumbnails/ReesewitherspoonCIA101202.jpg
/home/public_html/videos/thumbnails/snagItNarration.jpg
/home/public_html/videos/thumbnails/Minissha-Lamba.jpg
/home/public_html/videos/thumbnails/Lindsaydance101201.jpg
/home/public_html/videos/thumbnails/Mileyphoto101203.jpg
```

6. Uncompress tar.bz2 Archive File

To Uncompress highly compressed **tar.bz2** file, just use the following command. The below example command will untar all the **.flv** files from the archive file.

```
# tar -xvf videos-14-09-12.tar.bz2
/home/public_html/videos/flv/katrinabarbiedoll231110.flv
/home/public_html/videos/flv/BrookmuellerCIA101125.flv
/home/public_html/videos/flv/dollybackinbb4101125.flv
```

```
/home/public_html/videos/flv/JenniferRobert101130.flv
/home/public_html/videos/flv/JustinAwardmovie101125.flv
/home/public_html/videos/flv/Lakme-Fashion-Week.flv
/home/public_html/videos/flv/Mileyphoto101203.flv
/home/public_html/videos/flv/Minissha-Lamba.flv
```

7. List Content of tar Archive File

To list the contents of tar archive file, just run the following command with option **t** (**list content**). The below command will list the content of **uploadprogress.tar** file.

```
# tar -tvf uploadprogress.tar
-rw-r--r-- chregu/staff 2276 2011-08-15 18:51:10 package2.xml
-rw-r--r-- chregu/staff 7877 2011-08-15 18:51:10 uploadprogress/examples/index.php
-rw-r--r-- chregu/staff 1685 2011-08-15 18:51:10 uploadprogress/examples/server.php
-rw-r--r-- chregu/staff 1697 2011-08-15 18:51:10 uploadprogress/examples/info.php
-rw-r--r-- chregu/staff 367 2011-08-15 18:51:10 uploadprogress/config.m4
-rw-r--r-- chregu/staff 303 2011-08-15 18:51:10 uploadprogress/config.w32
-rw-r--r-- chregu/staff 3563 2011-08-15 18:51:10 uploadprogress/php_uploadprogress.h
-rw-r--r-- chregu/staff 15433 2011-08-15 18:51:10 uploadprogress/uploadprogress.c
-rw-r--r-- chregu/staff 1433 2011-08-15 18:51:10 package.xml
```

8. List Content tar.gz Archive File

Use the following command to list the content of **tar.gz** file.

```
# tar -tvf staging.tecmint.com.tar.gz
-rw-r--r-- root/root 0 2012-08-30 04:03:57 staging.tecmint.com-access_log
-rw-r--r-- root/root 587 2012-08-29 18:35:12 staging.tecmint.com-access_log.1
-rw-r--r-- root/root 156 2012-01-21 07:17:56 staging.tecmint.com-access_log.2
-rw-r--r-- root/root 156 2011-12-21 11:30:56 staging.tecmint.com-access_log.3
-rw-r--r-- root/root 156 2011-11-20 17:28:24 staging.tecmint.com-access_log.4
-rw-r--r-- root/root 0 2012-08-30 04:03:57 staging.tecmint.com-error_log
-rw-r--r-- root/root 3981 2012-08-29 18:35:12 staging.tecmint.com-error_log.1
-rw-r--r-- root/root 211 2012-01-21 07:17:56 staging.tecmint.com-error_log.2
-rw-r--r-- root/root 211 2011-12-21 11:30:56 staging.tecmint.com-error_log.3
-rw-r--r-- root/root 211 2011-11-20 17:28:24 staging.tecmint.com-error_log.4
```

9. List Content tar.bz2 Archive File

To list the content of **tar.bz2** file, issue the following command.

```
# tar -tvf Phpfiles-org.tar.bz2
drwxr-xr-x root/root 0 2012-09-15 03:06:08 /home/php/
-rw-r--r-- root/root 1751 2012-09-15 03:06:08 /home/php/iframe_ew.php
-rw-r--r-- root/root 11220 2012-09-15 03:06:08 /home/php/videos_all.php
-rw-r--r-- root/root 2152 2012-09-15 03:06:08 /home/php/rss.php
-rw-r--r-- root/root 3021 2012-09-15 03:06:08 /home/php/index.php
-rw-r--r-- root/root 2554 2012-09-15 03:06:08 /home/php/vendor.php
-rw-r--r-- root/root 406 2012-09-15 03:06:08 /home/php/video_title.php
-rw-r--r-- root/root 4116 2012-09-15 03:06:08 /home/php/report.php
-rw-r--r-- root/root 1273 2012-09-15 03:06:08 /home/php/object.html
```

10. Untar Single file from tar File

To extract a single file called **cleanfiles.sh** from **cleanfiles.sh.tar** use the following command.

```
# tar -xvf cleanfiles.sh.tar cleanfiles.sh
OR
# tar --extract --file=cleanfiles.sh.tar cleanfiles.sh
cleanfiles.sh
```

11. Untar Single file from tar.gz File

To extract a single file **tecminbackup.xml** from **tecminbackup.tar.gz** archive file, use the command as follows.

```
# tar -zxvf tecminbackup.tar.gz tecminbackup.xml
OR
# tar --extract --file=tecminbackup.tar.gz tecminbackup.xml
tecminbackup.xml
```

12. Untar Single file from tar.bz2 File

To extract a single file called **index.php** from the file **Phpfiles-org.tar.bz2** use the following option.

```
# tar -jxvf Phpfiles-org.tar.bz2 home/php/index.php
OR
# tar --extract --file=Phpfiles-org.tar.bz2 /home/php/index.php
/home/php/index.php
```

13. Untar Multiple files from tar, tar.gz and tar.bz2 File

To extract or untar multiple files from the **tar**, **tar.gz** and **tar.bz2** archive file. For example the below command will extract “**file 1**” “**file 2**” from the archive files.

```
# tar -xvf tecmint-14-09-12.tar "file 1" "file 2"
# tar -zxvf MyImages-14-09-12.tar.gz "file 1" "file 2"
# tar -jxvf Phpfiles-org.tar.bz2 "file 1" "file 2"
```

14. Extract Group of Files using Wildcard

To extract a group of files we use **wildcard** based extracting. For example, to extract a group of all files whose pattern begins with **.php** from a **tar**, **tar.gz** and **tar.bz2** archive file.

```
# tar -xvf Phpfiles-org.tar --wildcards '*.php'
# tar -zxvf Phpfiles-org.tar.gz --wildcards '*.php'
# tar -jxvf Phpfiles-org.tar.bz2 --wildcards '*.php'
/home/php/iframe_ew.php
/home/php/videos_all.php
/home/php/rss.php
/home/php/index.php
/home/php/vendor.php
/home/php/video_title.php
/home/php/report.php
/home/php/video.php
```

15. Add Files or Directories to tar Archive File

To add files or directories to existing tar archived file we use the option **r** (**append**). For example we add file **xyz.txt** and directory **php** to existing **tecmint-14-09-12.tar** archive file.

```
# tar -rvf tecmint-14-09-12.tar xyz.txt
# tar -rvf tecmint-14-09-12.tar php
drwxr-xr-x root/root      0 2012-09-15 02:24:21 home/tecmint/
-rw-r--r-- root/root 15740615 2012-09-15 02:23:42 home/tecmint/cleanfiles.sh
-rw-r--r-- root/root   863726 2012-09-15 02:23:41 home/tecmint/openvpn-2.1.4.tar.gz
-rw-r--r-- root/root 21063680 2012-09-15 02:24:21 home/tecmint/tecmint-14-09-12.tar
-rw-r--r-- root/root   4437600 2012-09-15 02:23:41 home/tecmint/phpmyadmin-2.11.11.3-1.el5.rf.noarch.rpm
-rw-r--r-- root/root    12680 2012-09-15 02:23:41 home/tecmint/rpmpforge-release-0.5.2-2.el5.rf.i386.rpm
-rw-r--r-- root/root 0 2012-08-18 19:11:04 xyz.txt
drwxr-xr-x root/root 0 2012-09-15 03:06:08 php/
-rw-r--r-- root/root 1751 2012-09-15 03:06:08 php/iframe_ew.php
-rw-r--r-- root/root 11220 2012-09-15 03:06:08 php/videos_all.php
-rw-r--r-- root/root 2152 2012-09-15 03:06:08 php/rss.php
-rw-r--r-- root/root 3021 2012-09-15 03:06:08 php/index.php
-rw-r--r-- root/root 2554 2012-09-15 03:06:08 php/vendor.php
-rw-r--r-- root/root 406 2012-09-15 03:06:08 php/video_title.php
```

16. Add Files or Directories to tar.gz and tar.bz2 files

The tar command don't have a option to add files or directories to an existing compressed **tar.gz** and **tar.bz2** archive file. If we do try will get the following error.

```
# tar -rvf MyImages-14-09-12.tar.gz xyz.txt
# tar -rvf Phpfiles-org.tar.bz2 xyz.txt
tar: This does not look like a tar archive
tar: Skipping to next header
xyz.txt
tar: Error exit delayed from previous errors
```

17. How To Verify tar, tar.gz and tar.bz2 Archive File

To verify any tar or compressed archived file we use option as **W** (verify). To do, just use the following examples of command.

(Note : You cannot do verification on a compressed (*.tar.gz, *.tar.bz2) archive file).

```
# tar tvfW tecmint-14-09-12.tar
tar: This does not look like a tar archive
tar: Skipping to next header
tar: Archive contains obsolescent base-64 headers
tar: VERIFY FAILURE: 30740 invalid headers detected
Verify -rw-r--r-- root/root      863726 2012-09-15 02:23:41 /home/tecmint/openvpn-2.1.4.tar.gz
Verify -rw-r--r-- root/root    21063680 2012-09-15 02:24:21 /home/tecmint/tecmint-14-09-12.tar
tar: /home/tecmint/tecmint-14-09-12.tar: Warning: Cannot stat: No such file or directory
Verify -rw-r--r-- root/root    4437600 2012-09-15 02:23:41 home/tecmint/phpmyadmin-2.11.11.3-1.el5.rf.noarch.rpm
tar: /home/tecmint/phpmyadmin-2.11.11.3-1.el5.rf.noarch.rpm: Warning: Cannot stat: No such file or directory
Verify -rw-r--r-- root/root      12680 2012-09-15 02:23:41 home/tecmint/rpmpforge-release-0.5.2-2.el5.rf.i386.rpm
tar: /home/tecmint/rpmpforge-release-0.5.2-2.el5.rf.i386.rpm: Warning: Cannot stat: No such file or directory
Verify -rw-r--r-- root/root          0 2012-08-18 19:11:04 xyz.txt
Verify drwxr-xr-x root/root          0 2012-09-15 03:06:08 php/
```

18. Check the Size of the tar, tar.gz and tar.bz2 Archive File

To check the size of any **tar**, **tar.gz** and **tar.bz2** archive file, use the following command. For example the below command will display the size of archive file in Kilobytes (KB).

```
# tar -czf - tecmint-14-09-12.tar | wc -c
12820480
# tar -czf - MyImages-14-09-12.tar.gz | wc -c
112640
# tar -czf - Phpfiles-org.tar.bz2 | wc -c
20480
```

Tar Usage and Options

- **c** – create a archive file.
- **x** – extract a archive file.
- **v** – show the progress of archive file.
- **f** – filename of archive file.
- **t** – viewing content of archive file.
- **j** – filter archive through bzip2.
- **z** – filter archive through gzip.
- **r** – append or update files or directories to existing archive file.
- **W** – Verify a archive file.
- **wildcards** – Specify patterns in unix tar command.


That's it for now, hope the above **tar command examples** are enough for you to learn and for more information please use **man tar** command.

If you are looking to split any large tar archive file into multiple parts or blocks, just go through this article:

Don't Miss: Split Large 'tar' Archive into Multiple Files of Certain Size

If we've missed any example please do share with us via comment box and please don't forget to share this article with your friends. This is the best way to say thanks.....

 **Comments** **9**  **Pingbacks** **0**

Sunil  September 17, 2017 at 10:28 am

In this sentence "The tar is most widely used command to create compressed archive files and that can be moved easily from one disk to "anther" disk or machine to machine."

anther should be another.

And thanks a lot for this tutorial.

Reply



Ravi Saive  September 18, 2017 at 12:27 pm

@Sunil,

Thanks for the notifying us about that typo, corrected in the article..)

Reply

Rashmi  July 30, 2017 at 6:58 am

Thanks for posting the information.

It would be good if you could address the following in this page.

- 1) Missing word – In this article we will going to review – 'be' is missing between 'we' and 'going' words
- 2) Missing word – that might be helpful you – 'for' is missing between 'helpful' and 'you' words
- 3) Sentence Correction – Let's discuss the each option we have used in the above command for creating tar archive file.
Correction: Let's discuss each option that we have used in the above command for creating a tar archive file.
- 4) Not required: The following example of command – 'of' is not needed
- 5) Missing word: If you want untar in a different – 'to' is missing between 'want' and 'untar'
- 6) Correction: To list the content of tar archive file – 'content' should be 'contents' (Replace 'content' with 'contents' at appropriate location)
- 7) Correction: to a existing compressed tar.gz – 'a' should be 'an'
- 8) Correction: If we do try will get tbe following error – 'tbe' should be 'the'
- 9) Spelling: 'archvie' should be 'archive'
- 10) Spelling: 'patters' should be 'patterns'

Reply



David Zuccaro  March 20, 2017 at 7:36 am

why do you need a – with option cvf and not need it with option cvfz?


Reply



Binh Thanh Nguyen  March 6, 2017 at 10:56 am

Thanks, nice tips

Reply

Ferdinant  June 17, 2016 at 9:30 am

Very nice, and now the second most important one is missing, namely: how to create split tar files into blocks of certain size.

Anyway it helped me on my way.

Greetings

Reply



Ravi Saive  June 20, 2016 at 1:38 pm

@Ferdinant,

Thanks for finding it helpful, and also thanks for telling about that missing topic "**how to create split tar files into blocks of certain size**", we will surely write on this topic and publish it by next week, till then stay tuned to TecMint.com

Reply

Bhasker Reddy  November 4, 2015 at 3:58 am

While extracting a particular file from the tarball, just giving a file name doesn't work. You need to give the path of the file within the tarball.

For example: I have taken a backup of my home directory called "/home/aziz" and it contains test1 and test2 files.

\$ tar -xvf /tmp/aziz.tar test1 – This command does not work while extracting a particular called test1

\$ tar -xvf /tmp/aziz.tar home/aziz/test1 – This command works while extracting a file called test1

OR

\$ tar -extract -file=/tmp/aziz.tar home/aziz/test1

Reply



Ravi Saive @ November 4, 2015 at 10:51 am

@Bhasker,
Thanks for the quick tips, will include this in the article..

Reply