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testautomationacademy



Linux Guide for Beginners

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Let's know each other



Hi, I'm Jatin Shharma.
So I teach students and professionals these
interesting topics like:
Programming, Automation Testing and DevOps
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grep



Linux 50 important Commands

grep : Search for a given **string in a file** (case in-sensitive search).

```
grep -i "the" fileName.txt
```

grep : Print the **matched line, along with the 5 lines after it**.

```
grep -A 5 -i "example" fileName.txt
```

grep :Search for a given string in all files recursively

```
grep -r "Jatin" *
```

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grep -r "Jatin" *
```

find



The **find** command is one of the **most powerful tools in the Linux system administrators arsenal**.

It searches for files and directories in a directory hierarchy based on a user given expression and can perform user-specified action on each matched file.

find : Find files using file-name (case in-sensitive find)

```
find -iname "HelloWorld.java"
```

find : Find all empty files in home directory

```
find ~ -empty
```

Difference between grep and find?

The difference between grep and find command is that the grep is a command that helps to search content and display them.

while the find command helps to search and locate files according to the given criteria.

ssh



SSH is an encrypted network protocol used for remote access.

SSH (Secure Shell) is an encrypted network protocol used for connecting to devices over a network or the internet

ssh : Login to remote host

```
find ~ -empty
```

ssh : Debug ssh client

```
ssh -v -l jsmith remotehost.example.com
```

ssh: Display ssh client version

```
ssh -V
```

awk

Awk is a utility that enables a programmer to write tiny but effective programs in the form of statements that define text patterns that are to be searched for in each line of a document and the action that is to be taken when a match is found within a line

Awk is abbreviated from the names of the developers – **Aho, Weinberger, and Kernighan.**

WHAT CAN WE DO WITH AWK?

1. AWK Operations:

- (a) Scans a file line by line
- (b) Splits each input line into fields
- (c) Compares input line/fields to pattern
- (d) Performs action(s) on matched lines

2. Useful For:

- (a) Transform data files
- (b) Produce formatted reports

3. Programming Constructs:

- (a) Format output lines
- (b) Arithmetic and string operations

Remove duplicate lines using awk

```
awk '!($0 in array){ array[$0]; print }' temp
```

Print all lines from /etc/passwd that has the same uid and gid

```
awk -F ':' '$3==$4' passwd.txt
```

Print only specific field from a file.

```
awk '{print $2,$5;}' employee.txt
```

vim
VI improved



Go to the **143rd line of file**

```
vim +143 filename.txt
```

Go to the first match of the specified

```
vim +/search-term filename.txt
```

Open the file in read only mode.

```
vim -R /etc/passwd
```

diff and sort

Ignore white space while comparing.

```
diff -w name_list.txt name_list_new.txt
```

Sort a file in ascending order

```
sort names.txt
```

Sort a file in descending order

```
sort -r names.txt
```

pwd and cd

pwd is Print working directory. What else can be said about the good old **pwd** who has been printing the current directory name for ages.

pwd

Use “**cd -**” to toggle between the last two directories

sort names.txt

gzip



ZIP IT!

GNU zip (also known as GZIP) is a software application **with the purpose to compress files**.

To create a *.gz compressed file:

```
gzip test.txt
```

To uncompress a *.gz file:

```
gzip -d test.txt.gz
```

bzip2

To create a *.bz2 compressed file:

```
bzip2 test.txt
```

To uncompress a *.bz2 file:

```
bzip2 -d test.txt.bz2
```

To extract a *.zip compressed file:

```
unzip test.zip
```

View the contents of *.zip file (Without unzipping it):

```
unzip -l jasper.zip
```

Archive:jasper.zip

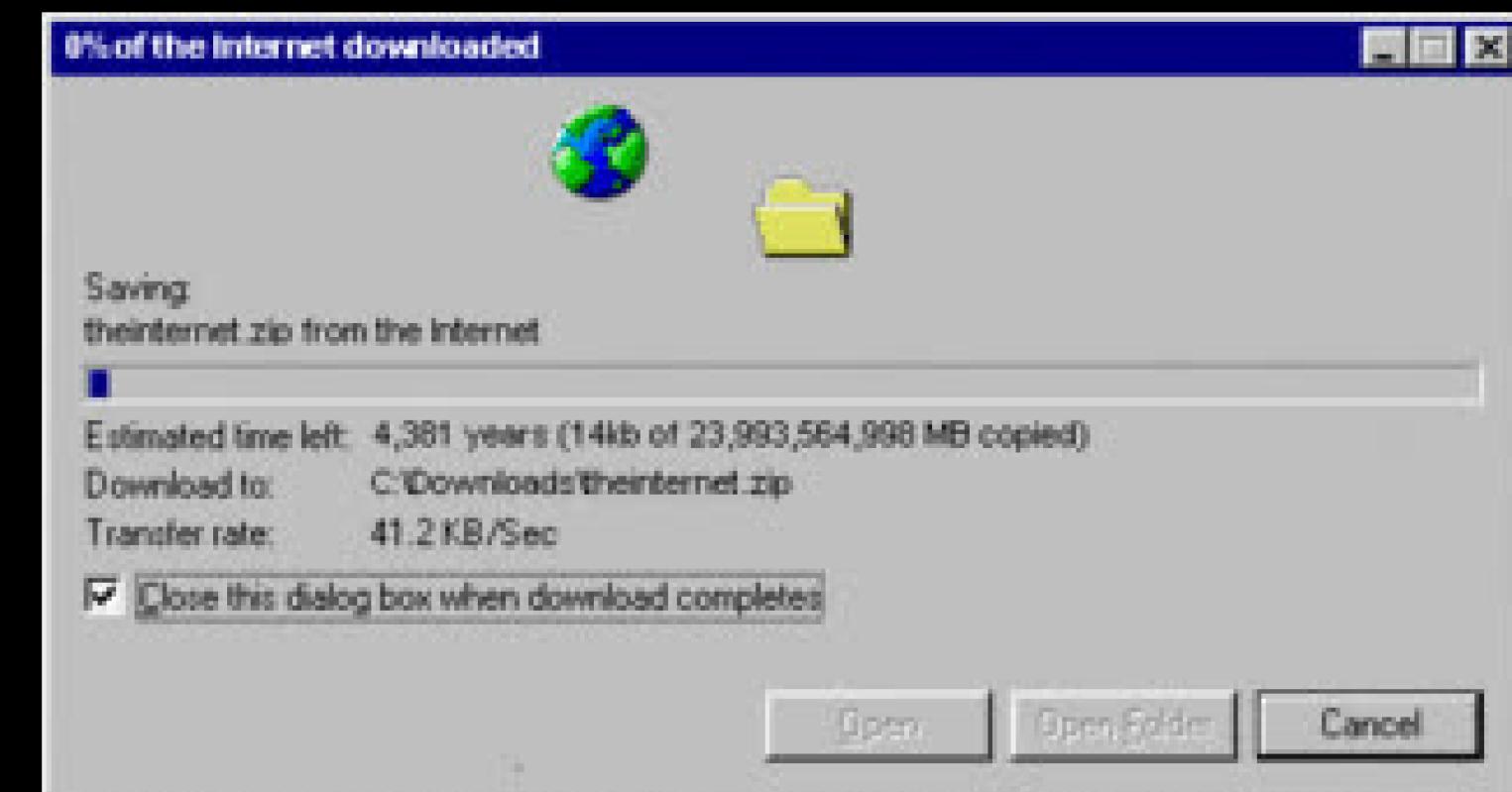
Length Date TimeName

----- ----- -----

40995 11-30-98 23:50 META-INF/MANIFEST.MF

1. GZIP is a free application used to compress files; BZIP2 is an open source lossless data compression algorithm that makes it possible to retrieve the original data of a compressed file.
2. GZIP consists of a 10-byte header, optional headers, a body, and an 8-byte footer; BZIP2 consists of no fewer than nine layers of compression techniques.

wget



The quick and effective method to download software, music, video from internet is using wget command.

```
wget https://get.jenkins.io/war-stable/2.346.2/jenkins.war
```

The quick and effective method to download software, music, video from internet is using wget command.

```
wget -O jenkins.zip https://get.jenkins.io/war-stable/2.346.2/jenkins.war
```

ping



Ping a remote host by sending

```
ping -c 5 google.com
```

date

Set the system date:

```
date -s "01/31/2010 23:59:53"
```

yum

The yum command is the primary tool for getting, installing, deleting, querying, and otherwise managing Red Hat Enterprise Linux RPM software packages from official Red Hat software repositories, as well as other third-party repositories

To install apache using yum.

```
yum install httpd
```

To upgrade apache using yum.

```
yum update httpd
```

To uninstall/remove apache using yum.

```
yum remove httpd
```

tail

Print the last 10 lines of a file by default.

```
tail filename.txt
```

Print N number of lines from the file named filename.txt

```
tail -n N filename.txt
```

View the content of the file in real time using tail -f. This is useful to view the log files, that keeps growing. The command can be terminated using CTRL-C.

```
tail -f log-file
```

less

less is very efficient while viewing huge log files, as it doesn't need to load the full file while opening.

```
less huge-log-file.log
```

Once you open a file using **less** command, following two keys are very helpful.

CTRL+F – forward one window

CTRL+B – backward one window