Search

- Advertise
- Linux Services
- About
- Archives
- Contact Us



- Home
- Linux Distro's
- Open Source
- Web Servers
 - o Apache
 - o Nginx
 - <u>Lighttpd</u>
- <u>Databases</u>
 - MySQL
 - o MongoDB
 - o CouchDB
- Free Linux eBooks
- <u>Linux Commands</u>

Select Language Powered by Google Translate Did You Know?

Mark Shuttleworth has announced the codename as "Trusty Tahr" for Ubuntu 14.04 LTS

Write For Us! and Earn \$\$\$s

12 Practical Examples of Linux grep Command

By Rob Krul Under: Linux Commands On: November 1, 2013

Download Your Free eBook NOW - A Newbie's Getting Started Guide to Linux

Have you ever been confronted with the task of looking for a particular string or pattern in a file, yet have no idea where to start looking? Well then, here is **grep** to the rescue!



12 Grep Command Examples

grep is a powerful file pattern searcher that comes equipped on every distribution of Linux. If, for whatever reason, it is not installed on your system, you can easily install it via your package manager (apt-get on Debian/Ubuntu and yum on RHEL/CentOS/Fedora).

\$ sudo apt-get install grep #Debian/Ubuntu
\$ sudo yum install grep #RHEL/CentOS/Fedora

I have found that the easiest way to get your feet wet with grep is to just dive right in and use some real world examples.

1. Search and Find Files

Let's say that you have just installed a fresh copy of the new **Ubuntu** on your machine, and that you are going to give **Python** scripting a shot. You have been scouring the web looking for tutorials, but you see that there are two different versions of **Python** in use, and you don't know which one was installed on your system by the **Ubuntu** installer, or if it installed any modules. Simply run this command:

```
$ sudo dpkg -l | grep -i python
```

Sample Output

ii	python2.7	2.7.3-0ubuntu3.4	Interactive high-level object-oriented language (version 2.7)
ii	python2.7-minimal	2.7.3-0ubuntu3.4	Minimal subset of the Python language (version 2.7)
ii	python-openssl	0.12-1ubuntu2.1	Python wrapper around the OpenSSL library
ii	python-pam	0.4.2-12.2ubuntu4	A Python interface to the PAM library

First, we ran **dpkg**—**l**, which lists installed *.**deb** packages on your system. Second, we piped that output to **grep**—**i** python, which simple states "go to grep and filter out and return everything with 'python' in it." The —**i** option is there to ignore-case, as **grep** is case-sensitive. Using the —**i** option is a good habit of getting into, unless of course you are trying to nail down a more specific search.

2. Search and Filter Files

The grep can also be used to search and filter within individual files or multiple files. Lets take this scenario:

You are having some trouble with your **Apache Web Server**, and you have reached out to one of the many awesome forums on the net asking for some help. The kind soul who replies to you has asked you to post the contents of your **/etc/apache2/sites-available/default-ssl** file. Wouldn't it be easier for you, the guy helping you, and everyone reading it, if you could remove all of the commented lines? Well you can! Just run this:

```
$ sudo grep -v "#" /etc/apache2/sites-available/default-ssl
```

The -v option tells **grep** to invert its output, meaning that instead of printing matching lines, do the opposite and print all of the lines that don't match the expression, in this case, the # commented lines.

3. Find all .mp3 Files Only

The **grep** can be very useful for filtering from **stdout**. For example, let's say that you have an entire folder full of music files in a bunch of different formats. You want to find all of the *.mp3 files from the artist **JayZ**, but you don't want any of the remixed tracks. Using a **find command** with a couple of **grep** pipes will do the trick:

```
$ sudo find . -name "*.mp3" | grep -i JayZ | grep -vi "remix"
```

In this example, we are using find to print all of the files with a *.mp3 extension, piping it to grep —i to filter out and prints all files with the name "JayZ" and then another pipe to grep —vi which filters out and does not print all filenames with the string (in any case) "remix".

1. 35 Practical Examples of Linux Find Command

4. Display Number of Lines Before or After Search String

Another couple of options are the $-\mathbf{A}$ and $-\mathbf{B}$ switches, which displays the matched line and number of lines either that come before or after the search string. While the man page gives a more detailed explanation, I find it easiest to remember the options as $-\mathbf{A} = \mathbf{after}$, and $-\mathbf{B} = \mathbf{before}$:

```
$ sudo ifconfig | grep -A 4 eth0
$ sudo ifconfig | grep -B 2 UP
```

5. Prints Number of Lines Around Match

The grep's -C option is similar, but instead of printing the lines that come either before or after the string, it prints the lines in either direction:

```
\$ sudo ifconfig | grep -C 2 lo
```

6. Count Number of Matches

Similar to piping a grep string to word count (we program) grep's built-in option can perform the same for you:

```
$ sudo ifconfig | grep -c inet6
```

7. Search Files by Given String

The -n option for grep is very useful when debugging files during compile errors. It displays the line number in the file of the given search string:

```
$ sudo grep -n "main" setup..py
```

8. Search a string Recursively in all Directories

If you would like to search for a string in the current directory along with all of the subdirectories, you can specify the -r option to search recursively:

```
$ sudo grep -r "function" *
```

9. Searches for the entire pattern

Passing the -w option to grep searches for the entire pattern that is in the string. For example, using:

```
$ sudo ifconfig | grep -w "RUNNING"
```

Will print out the line containing the pattern in quotes. On the other hand, if you try:

```
$ sudo ifconfig | grep -w "RUN"
```

Nothing will be returned as we are not searching for a pattern, but an entire word.

10. Search a string in Gzipped Files

Deserving some mention are grep's derivatives. The first is **zgrep**, which, similar to **zcat**, is for use on **gzipped** files. It takes the same options as **grep** and is used in the same way:

```
$ sudo zgrep -i error /var/log/syslog.2.gz
```

11. Match Regular Expression in Files

The **egrep** is another derivative that stands for "**Extended Global Regular Expression**". It recognizes additional expression meta-characters such **at +?** I and (). egrep is very useful for searching source files, and other pieces of code, should the need arise. It can be invoked from regular grep by specifying the **–E** option.

```
$ sudo grep -E
```

12. Search a Fixed Pattern String

The fgrep searches a file or list of files for a fixed pattern string. It is the same as grep -F. A common way of using fgrep is to pass a file of patterns to it:

```
$ sudo fgrep -f file_full_of_patterns.txt file_to_search.txt
```

This is just a starting point with **grep**, but as you are probably able to see, it is invaluable for a variety of purposes. Aside from the simple one line commands we have implemented, **grep** can be used to write powerful **cron** jobs, and robust **shell scripts**, for a start. Be creative, experiment with the options in the **man page**, and come up with **grep expressions** that serve your own purposes!





Rob Krul

Rob is an avid user of Linux and Open Source Software, with over 15 years experience in the tech geek universe. Aside from experimenting with the many flavors of Linux, he enjoys working with BSDs, Solaris, and OS X. He currently works as an Independent IT Contractor.

Adob-i--- N. N. Linux Eroo. N. Buthon N. Luct String N. Endors

Linux Services & Free WordPress Setup



Our post is simply 'DIY' aka 'Do It Yourself, still you may find difficulties and want us to help you out. We offer wide range of Linux and Web Hosting Solutions at fair minimum rates. Please submit your orders by Clicking Here.

Tweet

113

Like

10

2

Share

Leave a Comment

Local Restaurant Scripting File system backup Web hosting servers infolinks <u>Database</u> Regular Expression **Backup Utilities** Free ebook pdf

« Previous Post

10 Lesser Known Linux Commands - Part 2

Next Post »

Related Post(s):

- 1. 12 TOP Command Examples in Linux
- How to Reset Forgotten Root Password in RHEL/CentOS and Fedora
 12 Useful "df" Commands to Check Disk Space in Linux
- 4. Pydf an Alternative "df" Command to Check Disk Usage in Different Colours
- 5. 20 Advanced Commands for Linux Experts
- 6. 15 Useful "ifconfig" Commands to Configure Network Interface in Linux

Leave a Reply

Name (Required)		
Mail (will not be published) (Required)		
Website		

Submit Comment

- Twitter 1070 Twitter
- Facebook 17351 Facebook
- Google+ 921 Google+
- RSS 1905 Subscribers

Become A TecMint Subscriber to receive latest Updates.

Enter Your Email Addr Signup!

D

- Popular
- <u>Latest</u>
- Comments
- Tags

11/1/2013 6:43 PM 4 of 6



Install Apache 2.2.15, MySQL 5.5.34 & PHP 5.5.4 on RHEL/CentOS 6.4/5.9 & Fedora 19-12 113 Comments



Wine 1.7.3 Released – Install in RHEL, CentOS and Fedora 108 Comments



Install Cacti (Network Monitoring) on RHEL/CentOS 6.3/5.8 and Fedora 17-12 103 Comments



CentOS 6.4 Step by Step Installation Guide with Screenshots 88 Comments



CentOS 6.3 Step by Step Installation Guide with Screenshots 84 Comments



Google Chrome 29 Released – Install on RHEL/CentOS 6 and Fedora 19/15 70 Comments

:: Advertise ::







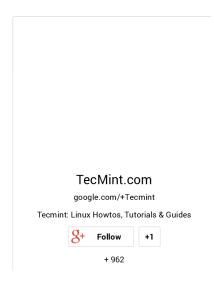




:: Download Free Linux eBooks ::

- Introduction to Linux A Hands on Guide
- The GNU/Linux Advanced Administration
- Securing & Optimizing Linux: The Hacking Solution
- Linux Command Line Cheat Sheet
- A Newbie's Getting Started Guide to Linux
- Create Your Own Linux System from Scratch
- Linux Shell Scripting Cookbook Second Edition
- <u>Linux Bible The Complete Tutorial Resource</u>

:: Follow Us ::



:: About ::

TecMint.com is a website that publishes practical and useful out-of-the-box articles for aspirant like you and me. We seek to present exceptional, remarkable tips, tutorials, and resources that the modern web professional will appreciate.

:: Our Services :: Know More

We offer wide range of Linux Web Hosting and Management Services includes Linux hosting, WordPress hosting, Joomla Hosting, CMS hosting, Website migration and Custom solutions, making us a one-stop destination for all your possible hosting needs at fair minimum rates.

:: Advertise :: Submit Order

TecMint.com is visited by tens of thousands of Linux users and has a excellent reputation in the search engine ranking. Most of the traffic comes from Google organic search (80%). Spread your messages or products to an engaged readers by advertising with us.

<u>Home</u> | <u>Privacy Policy</u> | <u>Copyright Policy</u>

© 2012-2013 All Rights Reserved.

Advertise Now

- 25 Hardening Security Tips for Linux Servers
- 60 Commands of Linux : A Guide from Newbies to System Administrator
- 15 Command Line Tools to Monitor Linux Performance
- <u>5 Best Practices to Secure and Protect SSH Server</u>
- 18 Tar Command Examples in Linux
- 20 Linux YUM (Yellowdog Updater, Modified) Commands
- 25 Useful Basic Commands of APT-GET and APT-CACHE
- 20 Funny Commands of Linux or Linux is Fun in Terminal
- 35 Practical Examples of Linux Find Command
- 10 Linux Distributions and Their Targeted Users

6 of 6