


Write a Simple Backupscript by www.Knightwise.com

This howto will show you how to write a very simple backupscript that will backup all the home directories of your users to individual zip files in a certain folder. Later you can copy this folder off the system to keep as an external backup or your data.

As an added bonus, all users of your system can drop files into this backup destination folder so they can be backed up too. They can however NOT read the files inside the folder, making it a secure "dropbox"

In the final step we will show you how to automate the process using the crontab.

Create a Destination folder for the backup (p1)



```
knightwise@cadmium:~$ sudo su
[sudo] password for knightwise:
root@cadmium:/home/knightwise# whoami
root
root@cadmium:/home/knightwise#
```

A terminal window screenshot with a black background and green text. The user 'knightwise' runs 'sudo su' and enters their password. The prompt changes to 'root@cadmium:/home/knightwise#'. The user then runs 'whoami', which outputs 'root'. A red arrow points to the 'root' prompt on the final line.

First you need to create a folder where the backups can be stored.

This folder should reside OUTSIDE your own homefolder (since this is the source of your backup) In this instance we are going to put the backup folder in the home folder of your linux system, but you can also put the destination on an external drive or a different hard drive in your system.

First we are going to have to switch to the root or sudo account of the system.

Switch to the root user account by typing **sudo su**

Enter your Sudo (root password).

You are now logged in as root. You can doublecheck by typing **whoami**

Create a destination folder (p2)

```
knightwise@cadmium:~$ sudo su
[sudo] password for knightwise:
root@cadmium:/home/knightwise# whoami
root
root@cadmium:/home/knightwise# mkdir /home/backupdestination
root@cadmium:/home/knightwise# chmod ug+rwx /home/backupdestination
root@cadmium:/home/knightwise# chmod o+wx /home/backupdestination
root@cadmium:/home/knightwise# chmod o-r /home/backupdestination
chmod: cannot access '/home/backupdestination': No such file or directory
root@cadmium:/home/knightwise# chmod o-r /home/backupdestination
root@cadmium:/home/knightwise# ls -alh /home
total 40K
drwxr-xr-x 10 root      root      4.0K 2009-03-14 11:38 .
drwxr-xr-x 22 root      root      4.0K 2008-09-22 00:11 ..
drwxrwx-wx  2 root      root      4.0K 2009-03-14 11:38 backupdestination
drwxr-xr-x  2 root      root      4.0K 2009-03-09 06:15 backuphomedir
drwx----- 5 root      root      4.0K 2008-09-22 00:23 Backups
drwxr-xr-x  3 karina    karina    4.0K 2008-06-24 07:43 karina
drwxr-xr-x 32 kdmurray  kdmurray  4.0K 2008-09-20 11:46 kdmurray
drwxr-xr-x 11 knightwise knightwise 4.0K 2009-03-14 09:35 knightwise
drwxr-xr-x  2 root      root      4.0K 2008-07-08 10:29 Public
drwxrwxrwx  2 root      root      4.0K 2009-03-09 05:54 scripts
root@cadmium:/home/knightwise#
```

Next create a folder in your `/home/` directory called `backupdestination`

type : **`mkdir /home/backupdestination`**

Next change the rights on the directory so only the root user (and members of the `sudo` group) can read write and execute files in the directory. Do this by typing **`chmod ug+rwx /home/backupdestination`**

Then make sure all "other users" (the one who are not part of the root or `sudo` group) can only write and execute to the directory. That way each user on your system can backup their homedrive to the 'backupdestination' directory, but is unable to view the other backups that have been put there by the other users. Only the root users can do that.

To enable this type : **`chmod o+wx /home/backupdestination`**

Next remove the "read" rights of all other users by typing **`chmod o-r /home/backupdestination`**

Doublecheck if the rights are correct by typing **`ls -alh /home`**

The line in front of the `backupdestination` folder should read **`drwx-rwx-wx`** This in essence means that both root and all the members of the root group have read-write-execute rights on the files in this

directory, all "others" only have write-execute rights in this directory , but not the ability to read whats inside the folder.

Create a folder for the backupscript

```
root@codium:/home/knightwise# mkdir /home/backupscript
root@codium:/home/knightwise# cd /home/backupscript
root@codium:/home/backupscript# pwd
/home/backupscript
root@codium:/home/backupscript# █
```

Create a folder for the backupscript called scripts by typing **mkdir /home/backupscript**
change to the directory by typing **cd /home/backupscript**
Doublecheck if you are in the correct directory by typing **pwd**

Create the backupscript.

```
root@codium:/home/backupscript# touch backupscript.sh
root@codium:/home/backupscript# nano backupscript.sh █
```

Create the backupscript by typing **touch backupscript.sh**
Next edit the file by typing **nano backupscript.sh**

Edit the script.

```
GNU nano 2.0.7      File: backupscript.sh
zip -r /home/backupdestination/knightwise.zip /home/knightwise/
[ Read 1 line ]
^G Get Help  ^O WriteOut  ^R Read File  ^Y Prev Page  ^K Cut Text   ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page  ^U UnCut Tex ^T To Spell
```

In the backupscript we are going to tell the unix system to make a scheduled backup of all the home users folders to individual zip files in the backup directory.

Enter the following line(s) in the script :

zip -r /home/backupdestination/username.zip /home/username/

The "username" is to be replaced by the name of the user(s) on your linux system.

copy the line for every users homedirectory that you want to backup. For example

zip -r /home/backupdestination/john.zip /home/john/

zip -r /home/backupdestination/james.zip /home/james/

...

Save the file by hitting **CTRL X** (after answer **y** ad hit **enter**)

Make the script executable.

```
root@cadmium:/home/backupscript# chmod +x backupscript.sh
root@cadmium:/home/backupscript# ls -alh
total 12K
drwxr-xr-x  2 root root 4.0K 2009-03-14 12:18 .
drwxr-xr-x 11 root root 4.0K 2009-03-14 12:05 ..
-rwxr-xr-x  1 root root   64 2009-03-14 13:06 backupscript.sh
root@cadmium:/home/backupscript#
```

After the script has been saved we are going to make it executable.

To do this type **chmod +x backupscript.sh**

To check if the script is now executable type ls -alh , the readout in should look something like the above.

Test the script.

```
root@cadmium:/home/backupscript# ./backupscript.sh 1
2 adding: home/knightwise/ (stored 0%)
adding: home/knightwise/.pinerc (deflated 68%)
adding: home/knightwise/.bash_logout (deflated 28%)
adding: home/knightwise/mail/ (stored 0%)
adding: home/knightwise/mail/sent-mail (deflated 67%)
adding: home/knightwise/mail/saved-messages (deflated 33%)
adding: home/knightwise/mail/sent-mail-feb-2009 (deflated 82%)
adding: home/knightwise/.addressbook (stored 0%)
adding: home/knightwise/.irssi/ (stored 0%)
adding: home/knightwise/.irssi/config (deflated 67%)
adding: home/knightwise/.bash_history (deflated 77%)
adding: home/knightwise/podcasts/ (stored 0%)
adding: home/knightwise/podcasts/2009-03-05/ (stored 0%)
adding: home/knightwise/podcasts/2009-03-05/kc0012.mp3 (deflated 1%)
adding: home/knightwise/podcasts/2009-03-05/KC001.mp3
```

You can test the script by running it : type **./backupscript.sh**

Next check the `/home/backupdestination/` directory for a zip file of the name you specified.

You can do this by typing **ls /home/backupdestination**

Schedule the script to run automatically

```
GNU nano 2.0.7 File: /tmp/crontab.wFpWFC/crontab
01 12 * * * /home/backupscript/backupscript.sh
```

[Read 2 lines]

^G Get Help **^O** WriteOut **^R** Read File **^Y** Prev Page **^K** Cut Text **^C** Cur Pos
^X Exit **^J** Justify **^W** Where Is **^V** Next Page **^U** UnCut Tex **^T** To Spell

Next type **crontab -e** to enter the crontab file of the root user

(this means that you will be able to automate the execution of your backupscript with root user rights)

Add the following line below the other lines that are present:

01 12 * * * /home/backupscript/backupscript.sh

In this example the script will execute at the first minute of the twelfth hour every day of the week and every months. (you do not need to enter the first line , only the second)

To save the file hit **control x** type **y** and hit **enter**

More information.

More information can be found using the following links.

Chmod : <http://en.wikipedia.org/wiki/Chmod#Options>

Zip files : <http://www.go2linux.org/ubuntu-debian-Linux-zip-files-to-share-with-windows>

Crontab : <http://en.wikipedia.org/wiki/Cron>

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Those of you who have been following me on twitter probably know by now that I sold my old generation one Macbook this week. With mixed feelings I reinstalled the little while buddy and took it towards its new owners who were already jumping with joy to get their hands on it. I do say mixed feelings because , aside from being a little sad to say goodbye to the last white apple laptop in the house (we said shalom to our Ibook last year) I am very exited about the next part of the story , the part where I get to buy myself a new toy. Of course I had been looking at the new Unibody Macs for quite some time, but until now I was not very tempted to buy one. (we have a last generation Macbook Pro in the house, and the specs don't really differ from the later models) And just like the other times Mac came out with a "new model", me and Nyana needed some some time to get used to the new designs (at first we always go .. Yuck ! ... and then we change our minds). So with the Macbook gone (I don't hold on to hardware longer then two years) its time to go for something new.



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