GNU/Linux Post–Installation Checklist

Defying Murphy's Laws

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This document provides a checklist for steps you should take immediately after installing GNU/Linux. These steps will save you a lot of bother if you encounter any problems later on. This document also includes a shell script for automating the post installation process.

Table of Contents

1. Introduction.....1
1.1. Copyright Information.....1
1.2. Disclaimer.....1
1.3. Feedback.....2

2. Post−Installation Steps.....3

3. Shell script.....4
3.1. The script.....5

1. Introduction

You have just completed installing your own Linux system. You have just made an upgrade to your existing Linux system. You are happy with the first few checkouts and usage experience. You want to make sure you will enjoy this system in spite of any damage which may occur later because of any unexpected "faux pas".

It is a good idea to keep a snapshot of the new system, so that you can be assured that in the event of any misfortune with your Linux installation, you can always recover without any permanent damage. This checklist will help you with precautionary steps you must take, as soon as you complete installation of Linux. It is a sequel to the GNU/Linux pre−installation checklist, and a companion to the official Linux Installation HOWTO. This checklist also contains a Section 3 which will automate the process of making a snapshot of your system.

1.1. Copyright Information

1.2. Disclaimer

No liability for the contents of this documents can be accepted. Use the concepts, examples and other content at your own risk. As this is a new edition of this document, there may be errors and inaccuracies, that may of course be damaging to your system. Proceed with caution, and although this is highly unlikely, the author(s) do not take any responsibility for that.

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Naming of particular products or brands should not be seen as endorsements.

You are strongly recommended to make a backup of your system before major installation and continue to do so at regular intervals.

1.3. Feedback

This document and the Section 3 are continuously updated. Make sure you are referring to the latest version of this document, by visiting the Linux post−install site frequently. Email `<algolog@hd1.vsnl.net.in>` with your feedback and suggestions.

> **Note:** We do NOT answer general queries on Linux. If you want professional (PAID) help with Linux −− ask Algologic. You may also visit our home page : Algologic Research & Solutions.

2. Post−Installation Steps

To enjoy your new Linux installation forever without any worries, it is important to take a few simple precautions. You must do these as soon as you complete installing Linux on your machine for the first time.

1. Create a boot diskette and a *rescue diskette*. Utilities for creating these diskettes are available along with your Linux distribution.
2. If you are the paranoid type (like me), you can make two copies of each of these diskettes. Diskettes are notorious for failing when they are most needed.
3. *Test out your boot diskette*. Make sure you can boot into Linux using the boot diskette. Remember Murphy's Laws may strike at you just when you least expect.
4. Checkout thoroughly your new system. Try all major packages.
5. Try out the X windows system, and the desktop, and the windows manager, if you have installed these.
6. Try out the connection to your LAN, and to the Internet.
7. Create at least one "non−root" account, for testing and debugging your installation. Perform ALL the above checkouts once again, using the non−root account you created.
8. Join a local Linux Users Group (LUG). You must find out if there is a LUG close by. If there is none, start an informal LUG yourself, in your neighbourhood, your campus, your city, or your town.
9. Join one or more mailing lists for Linux updates and news. There are literally hundreds of them.
10. Register yourself and your machine in the worldwide Linux Users Counter.
11. *And finally...*Download the Section 3 and run it. Make a safe copy (on a removable medium) of the directory: `/root/postinfo` which the script will create. You may also like to make a printout of the summary report `/root/postinfo/summary` created by the shell script.
12. You must run this shell script: as soon as you have installed Linux for the first time, and after every major revision or upgrade to your Linux system. You can also set up the script as a cron job, so that it runs itself periodically and automatically. This will avoid you a lost of hassles later, in case something gets messed up later.

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3. Shell script

The shell script (shivalik Ver. 1.0) is a convenient way to make backups of essential files and information. After downloading the script:

- Make sure that you have logged in as "root"
- Save the script in a directory with "root" permissions, say `/root/myscript`
- Change to that directory i.e. **cd /root/myscript** use gunzip to unzip the script i.e **gunzip ./shivalik.gz**
-

    IMPORTANT: You must read the warning given at the end of the script. Proceed with the next steps, only if you agree to the conditions specified in the warning...
- To execute the script: You must make the script executable (by root only) **chmod 700 ./shivalik**
- Verify that the paths of the various files which are to be saved, are correct and conform to your installation.
- You can execute the script correctly only if you are "root" (many of the files being saved need root permissions).

Now you can execute (run) the above script (remember you must be "root", to do this) −− type **./shivalik**

The script is profusely documented. It does not modify (or delete) any of your files or directories. It creates a well−protected backup of some essential files and information. The entire script is available for you to browse and understand its working. Feel free to go through the script and add any additional features, or files which you wish to be backed up. You may also send your feedback to the author of this script (`<algolog@hd1.vsnl.net.in>`).

Remember, the **shivalik** script is not a tool for complete backup and recovery. Ideally, the best thing to do would be to make a verbatim copy of your entire Linux installation along with all files and directories. This is not always possible, necessary, or advisable. The next best thing would be to take a backup of the most essential information and files. The **shivalik** script achieves this for you. The script creates a directory called `/root/postinfo/`, and stores all essential information (and files) there. To be absolutely prepared for any eventuality, you must copy the entire `/root/postinfo/` on a removable medium, as soon as the script is executed.

Recovery and Repair: In the event of any problems later, you can reconstruct the damaged files by copying the files you have backed up in the `/root/postinfo/` directory. It is as simple as that.

The structure of the `/root/postinfo/` directory, and files found within, will be as follows:

`/root/postinfo/summary`

Contains a summary report of the status of your system (memory, partitions, mount points, disk usage). This file also has the list of files which have been saved. It also contains admin info like date and time of backup, shivalik version number etc.

`/root/postinfo/postinfo.tar.gz`

Contains a copy of the earlier postinfo (if any). This is a fall back to a fall back!

`/root/postinfo/snapshot.gz`

Contains a gzipped structured listing of *ALL* files and directories of your Linux system (the directories "tree"). You can unzip this file and use any plain text editor to know the location of any file. Of course, you cannot retrieve the contents of that file unless you had saved it explicitly elsewhere.

/root/postinfo/shivalik

This is a copy of the shivalik script which was used for making the post install backup. At the time of recovery after an incident, you can always examine this script to know how the backup was done earlier. You will always have a consistent copy of the script and the files created by the script.

/root/postinfo/etcfiles/

This *subdirectory* contains a copy of many essential files from the `/etc/` directory of your Linux installation. It also contains copies of the various configuration files stored in the `/etc/` directory.

/root/postinfo/otherfiles/

This *subdirectory* contains a copy of some essential files (those which are not in the `/etc/` directory) of your Linux installation. If you want, you can add any other files here, and get it saved automatically with others.

3.1. The script...

```
#-----------------------------------------------
#           shivalik  \(Ver. 1.0\)
#Please read the WARNING section of this script first

#This script collects post installation information
#this can also be run occasionally to collect all useful
#information about your Linux installation, in one place
#The output will be written to /root/postinfo/
#a summary report will be written in /root/postinfo/summary

#For usage and related information, please consult:
#http://algolog.tripod.com/postlnx.htm
# ----------------------------------------------

clear
echo
echo "------------------------------------------------------------"
echo This is the output of Partha\'s shivalik script \(Ver.1.0\)
echo You must be \"root\", for this script to work correctly
echo You must also read and accept the terms and warnings given
echo in the WARNINGS section of this script
echo "------------------------------------------------------------"
echo
echo "### STEP 0 ### Preparation work"
echo First we create the /root/postinfo/ directory if does not exist already
test ! -d /root/postinfo && mkdir /root/postinfo

echo Saving current version of all postinfo files
echo But first we delete the earlier version i.e. current-1 version
test -e /root/postinfo/oldpostinfo* &&  rm /root/postinfo/oldpostinfo.tar.gz
```

```
#the oldpostinfo file is made temporarily in /root
#it will be moved to /root/postinfo
tar -zcvf /root/oldpostinfo.tar.gz /root/postinfo/*

#check if above tar succeeded
if
test -s /root/oldpostinfo.tar.gz
then
echo old postinfo saved in /root/oldpostinfo.tar.gz
ls -l /root/oldpostinfo*
else
echo Could not save oldpostinfo
echo Abandoning shivalik script
exit
fi


#now delete all the current postinfofiles
rm -rf /root/postinfo/*
#and start a new summary file
echo  shivalik \(Ver. 1.0\) > /root/postinfo/summary
echo -n "Report created on: " >> /root/postinfo/summary
date -R >> /root/postinfo/summary
echo And now, move the oldpostinfo file to /root/postinfo/ directory
mv /root/oldpostinfo.tar.gz /root/postinfo
#

#copy the shivalik script
echo charity begins at home
echo We make a copy of the shivalik script
echo We make a copy of the shivalik script >> /root/postinfo/summary
echo in /root/postinfo/ >> /root/postinfo/summary
cp ./shivalik /root/postinfo/shivalik

#taking stock
echo
echo Contents of /root/postinfo at the end of STEP-0
ls -AlR /root/postinfo
echo End of "### STEP 0 ###
echo
#
#
echo
echo "### STEP 1 ### Make a snapshot of the system"
echo >> /root/postinfo/summary
echo "### STEP 1 ### A snapshot of all the files and directories" >>  /root/postinfo/summary
echo The first step is to take stock of your computer contents
echo This is going to take several minutes
echo So, go and fetch your coffee mug !
ls -AlRH / >> /root/postinfo/snapshot
rm -f /root/postinfo/snapshot.gz
gzip /root/postinfo/snapshot
echo snapshot created
echo An exhaustive listing of all files has been made and >> /root/postinfo/summary
echo stored in /root/postinfo/snapshot.gz >> /root/postinfo/summary
ls -l /root/postinfo/snapshot.gz >> /root/postinfo/summary

# taking stock at the end of this step
echo
echo Contents of /root/postinfo at the end of this STEP
ls -l /root/postinfo
echo End of "### STEP 1 ###
```

```
echo
#
#
echo

echo "### STEP 2 ### Vital statistics"
echo >> /root/postinfo/summary
echo "### STEP 2 ### Vital statistics" >> /root/postinfo/summary

echo Collecting vital statistics

echo .....about memory
echo "---- cat /proc/meminfo ---------" >> /root/postinfo/summary
cat /proc/meminfo >> /root/postinfo/summary

echo .....about partitions and mountpoints
echo "---- cat /proc/partitions---------" >> /root/postinfo/summary
cat /proc/partitions >> /root/postinfo/summary

echo .....about diskspace used
echo "---- df ---------" >> /root/postinfo/summary
df >> /root/postinfo/summary

echo .....about modules
echo "---- cat /proc/modules ---------" >> /root/postinfo/summary
cat /proc/modules >> /root/postinfo/summary

# taking stock at the end of this step

echo
echo Contents of /root/postinfo at the end of STEP-2
ls -AlR /root/postinfo
echo End of "### STEP 2 ###
echo
#
#
echo
echo "### STEP 3 ### Now we save some important files from /etc "
echo This section may need some customising, depending on the
echo installation you have done, and the distribution you have used,
echo and the options you have chosen during installation.

echo >> /root/postinfo/summary
echo "### STEP 3 ### Now we save some important files from /etc" >>  /root/postinfo/summary
test ! -d /root/postinfo/etcfiles && mkdir /root/postinfo/etcfiles

echo ..... saving XF86Config -- your XWindows config file
cp /etc/XF86Config /root/postinfo/etcfiles
echo "cp /etc/XF86Config /root/postinfo/" >> /root/postinfo/summary

echo ..... saving /etc/fstab file
cp /etc/fstab  /root/postinfo/etcfiles
echo "cp /etc/fstab /root/postinfo/" >> /root/postinfo/summary

echo ..... saving /etc/profile file
cp /etc/profile  /root/postinfo/etcfiles
echo "cp /etc/profile /root/postinfo/" >> /root/postinfo/summary

echo ..... saving /etc/profile.local file
cp /etc/profile.local  /root/postinfo/etcfiles
echo "cp /etc/profile.local /root/postinfo/" >> /root/postinfo/summary
```

```
echo ".... saving /etc/*conf files"
cp /etc/*conf /root/postinfo/etcfiles

echo ".... saving /etc/*config files"
cp /etc/*config /root/postinfo/etcfiles

echo the following files from /etc have been copied to  /root/postinfo/etcfiles >> /root/postinfo/su
echo "/etc/*conf" >> /root/postinfo/summary
echo "/etc/*config" >> /root/postinfo/summary

# taking stock at the end of this step
echo
echo Contents of /root/postinfo at the end of this STEP−3
ls −AlR /root/postinfo
echo End of "### STEP 3 ###
echo
#
#

echo
echo "### STEP 4 ### Now we save some other important files"
echo This section may need some customising, depending on the
echo installation you have done, and the distribution you have used,
echo and the options you have chosen for the installation
echo The following stuff is  designed for SuSe  7.1

echo "### STEP 4 ### Now we save some other important files" >>  /root/postinfo/summary
echo in /root/postinfo/otherfiles >> /root/postinfo/summary
echo You can add any other files to backed up, here
test ! −d /root/postinfo/otherfiles && mkdir /root/postinfo/otherfiles
ls −l /root/postinfo/

echo ..... saving /etc/init.d/boot.local −−
cp /etc/init.d/boot.local /root/postinfo/otherfiles
echo "cp /etc/init.d/boot.local /root/postinfo/otherfiles" >>  /root/postinfo/summary

echo ..... saving /etc/init.d/halt.local −−
cp /etc/init.d/halt.local /root/postinfo/otherfiles
echo "cp /etc/init.d/halt.local /root/postinfo/otherfiles" >>  /root/postinfo/summary

# taking stock at the end of this step
echo
echo Contents of /root/postinfo at the end of this STEP−4
ls −AlR /root/postinfo
echo End of "### STEP 4 ###
echo

echo
echo "### STEP 999 ### Wrap up, clean up"
echo >> /root/postinfo/summary

echo "### STEP 999 ### Wrap up, clean up, sum up" >>  /root/postinfo/summary
echo summing up, cleaning up
# for security reasons we make /root/postinfo inaccessible to
# and invisible to non−root
chmod 700 /root/postinfo
chmod 700 /root/postinfo/etcfiles
chmod 700 /root/postinfo/otherfiles
chmod 700 /root/postinfo/*
chmod 700 /root/postinfo/etcfiles/*
chmod 700 /root/postinfo/otherfiles/*
echo This is the contents of /root/postinfo >> /root/postinfo/summary
```

```
ls -AlR /root/postinfo >> /root/postinfo/summary
echo "###### THE END #####" >> /root/postinfo/summary



# taking stock at the end of this step
echo
echo Contents of /root/postinfo at the end of this STEP-999
ls -AlR /root/postinfo
echo End of "### STEP 999 ###"
echo
echo "###### THE END #####"
echo IMPORTANT: You must now copy all the files in /root/postinfo
echo to a safe location, preferably on a different drive or on
echo a removable backup medium.
echo " "
echo You will find a summary report of this procedure, in
echo /root/postinfo/summary
echo You will find the earlier version of summary \(if any\)
echo inside /root/postinfo/oldpostinfo.tar.gz
echo " "

#
echo "
#----------------------------------------------------------
#                WARNING  WARNING WARNING
#                 shivalik (ver. 1.0)
# This script is being made accessible to you without any
# warranties or assurances about its performance or
# usability for any purpose. Be informed that you are using
# this script out of your own initiative and willingness,
# and at your own risk and peril.
# You will find the latest version of this script, and related
# information at: http://algolog.tripod.com/postlnx.htm
# Copyrights and all rights reserved by:
# Dr. S. Parthasarathy (algolog@hd1.vsnl.net.in)
#---------------------------------------------------------
"
```