1. **Archiving**

There are several archiving tools present in Linux, in the section below there will be described a series of commands most used in archiving an extracting.

The **tar** (tape archive) command archives, lists and extracts files to and from a single file called tar file. A tar file can be created as a regular file on a disk or tape; it supports several options, some of which are summarized below:

-c creates a new archive

-f specifies archive destination

-j compresses the archive contents with bzip2 command

-t lists archive contents

-v verbose mode

-x extracts from a archive

-z compress the archive contents with the gzip command

Examples:

To create an archive of the home directory in a file called home.tar, you can use the following command:

**# tar -cvf /home.tar /home**

tar: Removing leading `/' from member names

/home/

/home/lost+found/

/home/vlad/

/home/vlad/.bash\_logout

/home/vlad/.bash\_profile

/home/vlad/.mozilla/

/home/vlad/.mozilla/plugins/

/home/vlad/.mozilla/extensions/

/home/vlad/.bashrc

/home/vlad/hello.sh

/home/vlad/.bash\_history

**# ls -la home.tar**

-rw-r--r-- 1 root root 10240 Mar 3 13:24 home.tar

To list the home.tar archive contents use:

**# tar -tvf home.tar**

drwxr-xr-x root/root 0 2011-02-24 17:13:20 home/

drwx------ root/root 0 2011-02-22 13:33:33 home/lost+found/

drwx------ vlad/vlad 0 2011-02-28 13:45:02 home/vlad/

-rw-r--r-- vlad/vlad 33 2009-01-21 20:15:22 home/vlad/.bash\_logout

-rw-r--r-- vlad/vlad 176 2009-01-21 20:15:22 home/vlad/.bash\_profile

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To extract/restore home from home.tar:

**# tar -xvf home.tar**

home/

home/lost+found/

home/vlad/

home/vlad/.bash\_logout

home/vlad/.bash\_profile

home/vlad/.mozilla/

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The **zip** command is a popular compression utility available on a number of operating systems platforms. This command adds the .zip extension to a zipped file. The following example compresses three files in to one called file1.zip. The first file name specified on the command line is automatically chosen as the same of the resultant compressed file.

**# touch file{1,2,3}**

**# ls -la**

total 12

drwxr-xr-x 2 root root 4096 Mar 3 13:35 .

drwxr-xr-x 25 root root 4096 Mar 3 13:35 ..

-rw-r--r-- 1 root root 0 Mar 3 13:35 file1

-rw-r--r-- 1 root root 0 Mar 3 13:35 file2

-rw-r--r-- 1 root root 0 Mar 3 13:35 file3

**# zip file1 file2 file3**

adding: file2 (stored 0%)

adding: file3 (stored 0%)

**# ll**

total 4

-rw-r--r-- 1 root root 0 Mar 3 13:35 file1

**-rw-r--r-- 1 root root 262 Mar 3 13:35 file1.zip**

-rw-r--r-- 1 root root 0 Mar 3 13:35 file2

-rw-r--r-- 1 root root 0 Mar 3 13:35 file3

The **unzip** command performs the opposite of what zip does. It uncompresses a zipped file and restores the files to their original state. To uncompress the three files

**#unzip file1.zip**