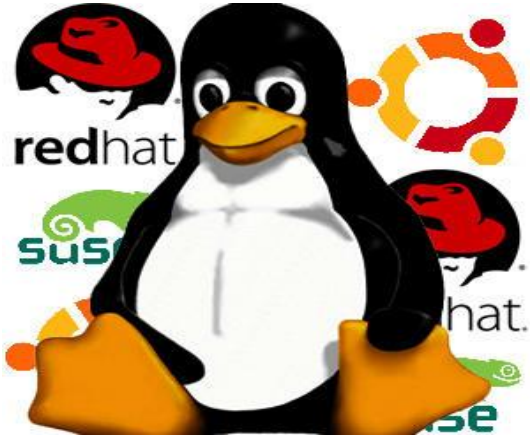
Miracle Institute of Leadership and Excellence

UNIX/LINUX COMMANDS



By

Satish Mongam

DB2 DBA

IBM Certified Database Associate

smongam@miraclesoft.com

Certified for IBM Information Management software

MIRACLE MSS SOFTWARE SYSTEMS, INC.

Agenda

- File Manipulation
- Directory
- File System & Administration
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- Text Manipulation / Searching
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File Manipulation Commands

- **cat**: Allows you to look, modify, append or combine a file.

  Usage:

  Create- **cat > filename**

  Look- **cat filename**

  Append- **cat >> filename**

  Combine- **cat file1.txt file2.txt > file3.txt**

- **mv**: Renames a file or moves it from one directory to another directory.

  Usage: **mv oldname newname**

File Manipulation Commands cont ...

- **cp:** Copies files from one location to another.

Usage: **cp [OPTION] <Source> <Target>**

- **rm:** Deletes a file without confirmation (by default).

Usage: **rm filenames/directory**

- **diff:** Displays two files and prints the lines that are different.

Usage: **diff [file1 file2] [dir1 dir2]**

- **nl:** Number lines and write files

Usage: **nl filename**

Directory Commands

- **cd:** Changes the directory.

Usage: **cd [directory]**

- **mkdir:** Short for make directory this command is used to create a new directory.

Usage: **mkdir dirname**

- **mv:** Renames a directory or moves it from one location to another.

Usage: **mv oldname newname**

- **cp -r:** Copy directories recursively.

Usage: **cp -r**

- **rmdir:** Deletes a directory.

Usage: **rmdir <dirname>**

Directory Commands cont ...

- **rm -r:** Remove directories and their contents recursively

Usage: **rm -r <dir name>**

- **pwd:** Short for print working directory the pwd command displays the name of the current working directory.

Usage: **pwd**

File System & Administration Commands

- **ls:** List information about the FILEs (the current directory by default).

Usage: **ls [pathnames]**

- **du:** Summarize disk usage of each FILE, recursively for directories.

Usage: **du directories**

- **df:** To show the amount of disk space that is free on file systems.

Usage: **df [file]**

- **chown**: Command to change the owner of a file.

Usage: **chown newowner filenames**

File System & Administration Commands cont ...

- **chgrp**: Changes the group that has access to a file or directory.

  Usage: **chgrp newgroup filenames**
- **free**: Displays the total amount of free and used physical memory and swap space in the system.

  Usage: **free**
- **passwd**: Allows you to change your password.

  Usage: **passwd [name]**
- **ln**: Creates a link to a file.

  Usage: **ln existingfile newname**

Network / Communication Commands

- **ping**: Send ICMP (Internet Control Message Protocol) ECHO_REQUEST to network hosts. It is used to test the reachability of a host on an Internet Protocol (IP) network.

  Usage: **ping domainname**
- **ifconfig**: Configure a network interface.

  Usage: **ifconfig**
- **set:** Sets the value of an environment variable. If no options or arguments are supplied, displays the names and values of all shell variables and functions.
- **env:** Used to manage Linux system environment. Invoking env command with no option will print environment variables for the current user.
- **uname :** Print system information.

Network / Communication Commands cont ...

- **nslookup:** Query Internet name servers interactively .
- **hostname:** Show or set the system's host name .

  Usage: **hostname**
- **netstat :** Print network connections, routing tables, interface statistics.
- **ssh**: Secure Shell (remote login program).

  Usage: **ssh username@ipaddress**
- **scp:** Secure copy (remote file copy program).

  Usage:

  scp source_file username@ipaddress:destination_path
- **mail**: Send and receive mail.

Filter Commands

- **wc**: Prints the total number of lines, words, and characters contained in a file.

  -l Counts the number of lines

  -w Counts the number of words

  -m or -c Counts the number of characters

  Usage:**wc [-c] [-l] [-w] [filename]**

- **more:** Filter for paging through text one screenful at a time.

  Usage: **more [file]**

- **head:** Displays the first few lines at the top of a file. It can be useful when you want a quick peek at a large file, as an alternative to opening the file with a text editor. By default, **head** will show the first ten lines of a file, but you can also tell it how many lines to display.

  Usage: **head -5 filename**

Filter Commands cont ...

- **tail:** The tail command displays the last few lines of a file. Like head, it can save you time, because it's a lot quicker than calling up a file with a text editor and scrolling all the way down to the bottom. By default, tail will show the last ten lines of a file, but you can also tell it how many lines to display.

  Usage: **tail -5 filename**
- **| (Pipes):** The pipe symbol "|" is used to direct the output of one command to the input of another.

  Usage: **ls -l | more**
- **sort:** Sort lines of text files

  Usage: **sort [options] filename**

Archive/Compression Commands: tar command

- The tar (tape archive) command bundles a bunch of files together and creates an archive (commonly called a tar file or tarball) on a tape, disk drive, or floppy disk.
- The original files are not deleted after being copied to the tar file.
- **Example**

To tar the content of folder sample in sample.tar:

tar -cvf /home/sample.tar /home/sample/

To extract the contents of the tar file:

tar -xvf /home/sample.tar

To display the contents of the tar file:

tar -tvf /home/sample.tar

To tar and compress the content of the folder sample:

tar -cvzf /home/sample.tar /home/sample/

Archive/Compression Commands: gzip and gunzip Commands

- The gzip program compresses a single file.
- Unlike tar, gzip replaces your original file with a compressed version.
- The amount of compression varies with the type of data, but a typical text file will be reduced by 70 to 80 percent.
  - Example: **gzip sample.txt**
  - You'll end up with a compressed file named **sample.txt.gz,** and sample.txt will be deleted.
- The gunzip program decompress the compressed file.
- To decompress the sample.txt.gz file, enter this:

gunzip sample.txt.gz

  - You'll get the original sample.txt file back, and sample.txt.gz will be deleted.

Archive/Compression Commands: compress and uncompress Commands

- The compress and uncompress programs work just like gzip and gunzip, but they use an older and less efficient compression technique.
- If you're using Linux, you shouldn't have to bother with compress and uncompress at all.
- Even if you come across a file created with compress (something with a .Z suffix), you can decompress it with gunzip, because gunzip understands both formats.
- Example:

compress some.file - Create compressed some.file.Z.

uncompress some.file.Z - Create decompressed some.file.

Archive/Compression Commands: zcat, zip and unzip Commands

- The zcat program is another Linux antique. It does the same thing as uncompress with the -c flag (decompresses and writes output to the pipeline), so the following two commands would be equivalent:

uncompress -c something.tar.X | tar xvf -

zcat something.tar.X | tar xvf -

- The zip and unzip programs work almost exactly like their cousins PKZIP and PKUNZIP in the DOS environment. You can squash a bunch of files together into a zip file like this:

zip squash.zip file1 file2 file3

- Then you can extract the original files like this:

unzip squash.zip

Process / Job Control Commands

- **ps :** ps is the shortage for Process Status.
  - The command should be used to display a snapshot of the currently running processes on Unix/Linux systems.
  - If you know the 'Task-Manager' which pops up under Windows NT/2000/XP when you press CTRL+ALT+DEL then you have a clue what ps does under Unix/Linux.
- **kill :** Terminate a process.

Usage: **kill -9 <pid>**

- **bg:** Place a job in background. Normally user can run a job in background, by adding & at end of the command. This function is not available on all Unix shell's.
- **fg** : Continues a stopped job by running it in the foreground. Some shells are not able to run this command.

Process / Job Control Commands cont...

- **top** : Displays top 20 processes dynamically which are taking more CPU memory.
- **at :** Executes a job at a specified time. But it work multiple time.
- **ctrl+z**: It will suspend the current foreground job.

  Usage: **ctrl+z**

Text Manipulation / Searching Commands

- **grep**: Searches for the given PATTERN. By default, grep prints the matching lines. In addition, two variant programs egrep and fgrep are available. egrep is the same as grep -E. fgrep is the same as grep -F.
- **awk**: It is a pattern scanning and processing languages also known as oawk, gawk, mawk and nawk allows for pattern scanning and processing.
- **vi**: Screen-oriented (visual) display editor.
- **sed:** Sort for Stream Editor. IT allows you to use pre-recorded commands to make changes to text.
- **cut**: Cut out selected fields of each line of a file.
- **find**: Searches for the files based on the given input.

Information Commands

- **who & w:** Displays who are logged in your system.
- **whoami :** Print effective userid.
- **man :** The man command is short for manual and provides in depth information about the requested command or allows users to search for commands related to a particular keyword.

Usage: **man <command name>**

- **whatis** : Describes what function a command/word performs in a short way.

Usage: **whatis keyword**

- **finger :** Lists information about the user.

Information Commands cont ...

- **history:** The 'history' utility allows you to use words from previous command lines in the command line you are typing. This simplifies spelling corrections and the repetition of complicated commands or arguments.

  Usage: **history [number]**

- **id:** Shows you the numeric user and group ID.

Usage: **id [option] [username]**

- **logname**: Print user's login name.
- **tty:** Print the file name of the terminal connected to standard input.

Miscellaneous Commands

- **date:** Print or set the system date and time.

  Usage: **date [options] [format]**
- **cal:** Displays a calendar.

  Usage: **cal [options] [[month] year]**
- **exit**: Allows you to exit from a program, shell or log you out of a Unix network.
- **clear:** Clear the terminal screen.
- **banner**:The Unix banner program outputs a large ASCII art version of the text that is supplied to it as its program arguments. One use of the command is to create highly visible separator pages for print jobs.

Any Queries ...

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Thank
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