

DTL -Assignment Linux Commands

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Commands:

mkdir, pwd,cd,ls,cat,tar:

```
abhi_6@Abhi-6: ~  
abhi_6@Abhi-6:~$ pwd  
/home/abhi_6  
abhi_6@Abhi-6:~$ ls  
Ass_7.c      file1.txt  file4.txt  file6.txt  sample.txt  
Linux_Commands  file2.txt  file5.txt  first      third.html  
abhi_6@Abhi-6:~$ cat file5.txt  
lorem ipsu  
ajofjoejf  
srjifwhifhg  
nrfkwiHgW  
abhi_6@Abhi-6:~$ cat file1.txt  
Hii,My MMIS no. is 112103062.  
abhi_6@Abhi-6:~$ diff file5.txt file1.txt  
1,4c1  
< lorem ipsu  
< ajofjoejf  
< srjifwhifhg  
< nrfkwiHgW  
---  
> Hii,My MMIS no. is 112103062.  
abhi_6@Abhi-6:~$ ls  
Ass_7.c      file1.txt  file4.txt  file6.txt  sample.txt  
Linux_Commands  file2.txt  file5.txt  first      third.html  
abhi_6@Abhi-6:~$ tar -cvf newarchive.tar /home/abhi_6/Linux_Commands  
tar: Removing leading `/' from member names  
/home/abhi_6/Linux_Commands/  
/home/abhi_6/Linux_Commands/Linux_Commands/  
abhi_6@Abhi-6:~$ ls  
Ass_7.c      file1.txt  file4.txt  file6.txt  newarchive.tar  third.html  
Linux_Commands  file2.txt  file5.txt  first      sample.txt
```

rmdir,rm,echo,mv,ls,cd,head,tail:

```
abhi_6@Abhi-6: ~$ rmdir file3.txt
rmdir: failed to remove 'file3.txt': Not a directory
abhi_6@Abhi-6: ~$ rm file3.txt
abhi_6@Abhi-6: ~$ echo Abhinandan
Abhinandan
abhi_6@Abhi-6: ~$ echo "This is DTL Assign"
>
> this"
This is DTL Assign

this
abhi_6@Abhi-6: ~$ echo "This is DTL Assign"
This is DTL Assign
abhi_6@Abhi-6: ~$ ls
Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6: ~$ cd Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands$ ls
Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands$ cd first
-bash: cd: first: No such file or directory
abhi_6@Abhi-6: ~/Linux_Commands$ cd Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands/Linux_Commands$ ls
abhi_6@Abhi-6: ~/Linux_Commands/Linux_Commands$ cd ..
abhi_6@Abhi-6: ~/Linux_Commands$ mv file1.txt /home/abhi_6/Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands$ ls
Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands$ cd Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands/Linux_Commands$ ls
abhi_6@Abhi-6: ~/Linux_Commands/Linux_Commands$ ls
abhi_6@Abhi-6: ~/Linux_Commands/Linux_Commands$ cd ..
abhi_6@Abhi-6: ~/Linux_Commands$ ls
Linux_Commands
abhi_6@Abhi-6: ~/Linux_Commands$ cd ..
abhi_6@Abhi-6: ~$ ls
Ass_7.c  Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6: ~$ less Ass_7.c
Ass_7.c  Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6: ~$ head Ass_7.c
// Online C compiler to run C program online
#include <stdio.h>

#define MAX 4
int stack_arr[MAX];
int top=-1;
void push(int data){
    top=top+1;
    stack_arr[top]=data;
}
abhi_6@Abhi-6: ~$
```

```

abhi_6@Abhi-6: ~
abhi_6@Abhi-6:~/Linux_Commands$ ls
Linux_Commands
abhi_6@Abhi-6:~/Linux_Commands$ cd ..
abhi_6@Abhi-6:~$ ls
Ass_7.c  Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6:~$ less Ass_7.c
abhi_6@Abhi-6:~$ ls
Ass_7.c  Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6:~$ head Ass_7.c
// Online C compiler to run C program online
#include <stdio.h>

#define MAX 4
int stack_arr[MAX];
int top=-1;
void push(int data){
    top=top+1;
    stack_arr[top]=data;

abhi_6@Abhi-6:~$ ls
Ass_7.c  Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6:~$ tail Ass_7.c

int main() {
    push(1);
    push(2);
    push(3);
    push(4);

    return 0;
}
abhi_6@Abhi-6:~$ ls
Ass_7.c  Linux_Commands  file1.txt  file2.txt  file4.txt  file5.txt  file6.txt  first  sample.txt  third.html
abhi_6@Abhi-6:~$ grep top Ass_7.txt
grep: Ass_7.txt: No such file or directory
abhi_6@Abhi-6:~$ grep top Ass_7.c
int top=-1;
top=top+1;
stack_arr[top]=data;
abhi_6@Abhi-6:~$

```

ls -l,chmod:

```

abhi_6@Abhi-6: ~
Unpacking zip (3.0-12build2) ...
Setting up unzip (6.0-26ubuntu1.1) ...
Setting up zip (3.0-12build2) ...
Processing triggers for man-db (2.10.2-1) ...
abhi_6@Abhi-6:~$ ls
Ass_7.c  file1.txt  file4.txt  file6.txt  newarchive.tar  third.html
Linux_Commands  file2.txt  file5.txt  first  sample.txt
abhi_6@Abhi-6:~$ ls -l
total 12
-rw-r--r-- 1 abhi_6 abhi_6 280 Jan 6 00:21 Ass_7.c
drwxr-xr-x 1 abhi_6 abhi_6 4096 Feb 5 19:34 Linux_Commands
-rw-r--r-- 1 abhi_6 abhi_6 30 Jan 11 11:39 file1.txt
-rwxr-xr-x 1 abhi_6 abhi_6 43 Jan 11 11:40 file2.txt
-rw-r--r-- 1 abhi_6 abhi_6 0 Feb 5 19:58 file4.txt
-rw-r--r-- 1 abhi_6 abhi_6 43 Feb 5 19:59 file5.txt
-rw-r--r-- 1 abhi_6 abhi_6 31 Feb 5 19:50 file6.txt
drwxr-xr-x 1 abhi_6 abhi_6 4096 Jan 11 11:32 first
-rw-r--r-- 1 abhi_6 abhi_6 10240 Feb 6 19:47 newarchive.tar
-rw-r--r-- 1 abhi_6 abhi_6 0 Jan 11 11:42 sample.txt
-rw-r--r-- 1 abhi_6 abhi_6 0 Jan 11 11:38 third.html
abhi_6@Abhi-6:~$ chmod -x Ass_7.c
abhi_6@Abhi-6:~$ ls -l
total 12
-rwxr-xr-x 1 abhi_6 abhi_6 280 Jan 6 00:21 Ass_7.c
drwxr-xr-x 1 abhi_6 abhi_6 4096 Feb 5 19:34 Linux_Commands
-rw-r--r-- 1 abhi_6 abhi_6 30 Jan 11 11:39 file1.txt
-rwxr-xr-x 1 abhi_6 abhi_6 43 Jan 11 11:40 file2.txt
-rw-r--r-- 1 abhi_6 abhi_6 0 Feb 5 19:58 file4.txt
-rw-r--r-- 1 abhi_6 abhi_6 43 Feb 5 19:59 file5.txt
-rw-r--r-- 1 abhi_6 abhi_6 31 Feb 5 19:50 file6.txt
drwxr-xr-x 1 abhi_6 abhi_6 4096 Jan 11 11:32 first
-rw-r--r-- 1 abhi_6 abhi_6 10240 Feb 6 19:47 newarchive.tar
-rw-r--r-- 1 abhi_6 abhi_6 0 Jan 11 11:42 sample.txt
-rw-r--r-- 1 abhi_6 abhi_6 0 Jan 11 11:38 third.html
abhi_6@Abhi-6:~$ chmod +777 file1.txt
abhi_6@Abhi-6:~$ ls -l
total 12
-rwxr-xr-x 1 abhi_6 abhi_6 280 Jan 6 00:21 Ass_7.c
drwxr-xr-x 1 abhi_6 abhi_6 4096 Feb 5 19:34 Linux_Commands
-rwxr-xr-x 1 abhi_6 abhi_6 30 Jan 11 11:39 file1.txt
-rwxr-xr-x 1 abhi_6 abhi_6 43 Jan 11 11:40 file2.txt
-rw-r--r-- 1 abhi_6 abhi_6 0 Feb 5 19:58 file4.txt
-rw-r--r-- 1 abhi_6 abhi_6 43 Feb 5 19:59 file5.txt
-rw-r--r-- 1 abhi_6 abhi_6 31 Feb 5 19:50 file6.txt
drwxr-xr-x 1 abhi_6 abhi_6 4096 Jan 11 11:32 first
-rw-r--r-- 1 abhi_6 abhi_6 10240 Feb 6 19:47 newarchive.tar
-rw-r--r-- 1 abhi_6 abhi_6 0 Jan 11 11:42 sample.txt
-rw-r--r-- 1 abhi_6 abhi_6 0 Jan 11 11:38 third.html
abhi_6@Abhi-6:~$ hostname
Abhi-6

```

ping,uname,wget,man

```
Abhi_6@Abhi-6:~$ ping google.com
PING google.com(bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e)) 56 data bytes
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=1 ttl=58 time=157 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=2 ttl=58 time=129 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=3 ttl=58 time=105 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=4 ttl=58 time=165 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=5 ttl=58 time=78.8 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=6 ttl=58 time=69.6 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=7 ttl=58 time=153 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=8 ttl=58 time=77.6 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=9 ttl=58 time=117 ms
64 bytes from bom12s16-in-x0e.1e100.net (2404:6800:4009:829::200e): icmp_seq=10 ttl=58 time=84.9 ms

--- google.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 26314ms
rtt min/avg/max/mdev = 69.565/113.777/165.249/34.215 ms
Abhi_6@Abhi-6:~$ uname
Linux
Abhi_6@Abhi-6:~$ uname -a
Linux Abhi-6 4.4.0-19041-Microsoft #2311-Microsoft Tue Nov 08 17:09:00 PST 2022 x86_64 x86_64 x86_64 GNU/Linux
Abhi_6@Abhi-6:~$ uname -s
Linux
Abhi_6@Abhi-6:~$ uname -n
Abhi-6
Abhi_6@Abhi-6:~$ wget https://www.coep.org.in/download/file/fid/7930
--2023-02-06 20:32:45-- https://www.coep.org.in/download/file/fid/7930
Resolving www.coep.org.in (www.coep.org.in)... 210.212.183.5
Connecting to www.coep.org.in (www.coep.org.in)[210.212.183.5]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 348042 (340K) [application/pdf]
Saving to: '7930'

7930          100%[=====] 339.88K  265KB/s   in 1.3s

2023-02-06 20:32:47 (265 KB/s) - '7930' saved [348042/348042]

Abhi_6@Abhi-6:~$ man sudo
Abhi_6@Abhi-6:~$
```

NAME

sudo, sudoedit – execute a command as another user

SYNOPSIS

```
sudo -h | -K | -k | -V
sudo -v [-ABknS] [-g group] [-h host] [-p prompt] [-u user]
sudo -l [-ABknS] [-g group] [-h host] [-p prompt] [-U user] [-u user] [command]
sudo [-ABbEHnPS] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory]
    [-r role] [-t type] [-T timeout] [-u user] [VAR=value] [-i | -s] [command]
sudoedit [-ABknS] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory]
    [-r role] [-t type] [-T timeout] [-u user] file ...
```

DESCRIPTION

sudo allows a permitted user to execute a command as the superuser or another user, as specified by the security policy. The invoking user's real (not effective) user-ID is used to determine the user name with which to query the security policy.

sudo supports a plugin architecture for security policies, auditing, and input/output logging. Third parties can develop and distribute their own plugins to work seamlessly with the sudo front-end. The default security policy is sudoers, which is configured via the file /etc/sudoers, or via LDAP. See the Plugins section for more information.

The security policy determines what privileges, if any, a user has to run sudo. The policy may require that users authenticate themselves with a password or another authentication mechanism. If authentication is required, sudo will exit if the user's password is not entered within a configurable time limit. This limit is policy-specific; the default password prompt timeout for the sudoers security policy is 0 minutes.

Security policies may support credential caching to allow the user to run sudo again for a period of time without requiring authentication. By default, the sudoers policy caches credentials on a per-terminal basis for 15 minutes. See the timestamp_type and timestamp_timeout options in sudoers(5) for more information. By running sudo with the -v option, a user can update the cached credentials without running a command.

On systems where sudo is the primary method of gaining superuser privileges, it is imperative to avoid syntax errors in the security policy configuration files. For the default security policy, sudoers(5), changes to the configuration files should be made using the visudo(8) utility which will ensure that no syntax errors are introduced.

When invoked as sudoedit, the -e option (described below), is implied.

Security policies and audit plugins may log successful and failed attempts to run sudo. If an I/O plugin is configured, the running command's input and output may be logged as well.

The options are as follows:

hostname,ifconfig,free,useradd,userdel,top

```
abhi_6@Abhi-6:~$ hostname
Abhi-6
abhi_6@Abhi-6:~$ whatis ifconfig
ifconfig: nothing appropriate.
abhi_6@Abhi-6:~$ ifconfig
Command 'ifconfig' not found, but can be installed with:
sudo apt install net-tools
abhi_6@Abhi-6:~$ free
              total        used        free      shared  buff/cache   available
Mem:      8303524      5421920      2652252        17720       229352      2747872
Swap:    21672700       264532     21408168
abhi_6@Abhi-6:~$ cal
Command 'cal' not found, but can be installed with:
sudo apt install ncal
abhi_6@Abhi-6:~$ sudo apt install ncal
[sudo] password for abhi_6:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package ncal
abhi_6@Abhi-6:~$ cal
Command 'cal' not found, but can be installed with:
sudo apt install ncal
abhi_6@Abhi-6:~$ ls /home/
abhi_6
abhi_6@Abhi-6:~$ sudo useradd avenger -m
abhi_6@Abhi-6:~$ sudo passwd captain
passwd: user 'captain' does not exist
abhi_6@Abhi-6:~$ sudo useradd avenger -m
useradd: user 'avenger' already exists
abhi_6@Abhi-6:~$ sudo passwd avenger
New password:
Retype new password:
passwd: password updated successfully
abhi_6@Abhi-6:~$ ls /home/
abhi_6  avenger
abhi_6@Abhi-6:~$ sudo userdel -r avenger
userdel: avenger mail spool (/var/mail/avenger) not found
abhi_6@Abhi-6:~$ ls /home/
abhi_6
abhi_6@Abhi-6:~$ top
top - 20:22:49 up 1 day,  1:17,  0 users,  load average: 0.52, 0.58, 0.59
Tasks:  4 total,   1 running,  3 sleeping,   0 stopped,   0 zombie
%Cpu(s):  1.0 us,   5.1 sy,   0.0 ni, 93.9 id,   0.0 wa,   0.0 hi,   0.0 si,   0.0 st
MiB Mem :  8108.9 total,  2702.0 free,  5183.0 used,   224.0 buff/cache
MiB Swap: 21164.7 total, 20908.0 free,   256.7 used. 2795.3 avail Mem
```

```
abhi_6@Abhi-6: ~
top - 20:22:43 up 1 day,  1:16,  0 users,  load average: 0.52, 0.58, 0.59
Tasks:  4 total,   1 running,  3 sleeping,   0 stopped,   0 zombie
%Cpu(s): 10.4 us, 16.8 sy,  0.0 ni, 72.5 id,   0.0 wa,  0.2 hi,   0.0 si,   0.0 st
MiB Mem :  8108.9 total,  2739.7 free,  5145.3 used,   224.0 buff/cache
MiB Swap: 21164.7 total, 20908.0 free,   256.7 used. 2833.1 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	9096	432	344	S	0.0	0.0	0:00.60	init
276	root	20	0	9444	252	192	S	0.0	0.0	0:00.00	init
277	abhi_6	20	0	14120	3788	3696	S	0.0	0.0	0:00.35	bash
468	abhi_6	20	0	15988	2348	1580	R	0.0	0.0	0:00.03	top

netstat,

```
abhi_6@Abhi-6:~$ wahtis netstat
Command 'wahtis' not found, did you mean:
  command 'what' from deb man-db (2.10.2-1)
Try: sudo apt install <deb name>
abhi_6@Abhi-6:~$ sudo apt install net-tools
[sudo] password for abhi_6:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 2s (95.1 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 24144 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Processing triggers for man-db (2.10.2-1) ...
abhi_6@Abhi-6:~$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags   Type       State           I-Node    Path
abhi_6@Abhi-6:~$ whoami
abhi_6
```