U.S. DEPARTMENT OF ENERGY'S
CYBERFORCE®
PROGRAM

CyberForce® 101

Linux
Cheat Sheet

📅 October 2023   ✉ cyberforcecompetition@anl.gov

Linux Cheat Sheet

Command	Description
ls	Lists all files and directories in the present working directory
ls -R	Lists files in sub-directories as well
ls -a	Lists hidden files as well
ls -al	Lists files and directories with detailed information like permissions, size, owner, etc.
cd or cd ~	Navigate to HOME directory
cd ..	Move one level up
cd	To change to a particular directory
cd /	Move to root directory
cat > filename	Creates a new file
cat filename	Displays the file content
cat file1 file2 > file3	Joins two files (file1, file2) and stores the output in a new file (file3)
mv file "new file path"	Moves the files to the new location
mv filename new_file_name	Renames the file to a new filename
sudo	Allows regular users to run programs with the security privileges of the superuser or root
rm filename	Deletes a file
man	Gives help information on a command
history	Gives a list of all past commands typed in the current terminal session
clear	Clears the terminal
mkdir directoryname	Creates a new directory in the present working directory or a at the specified path
rmdir	Deletes a directory
mv	Renames a directory
pr -x	Divides the file into x columns

Command	Description
pr -h	Assigns a header to the file
pr -n	Denotes the file with Line Numbers
ls -l	Shows the file type and access permission
r	Has read permission
w	Has write permission
x	Has execute permission
-=	Has no permission
chown user	For changing the ownership of a file/directory
chown user:group filename	Change the user as well as group for a file or directory
echo $VARIABLE	To display value of a variable
env	Displays all environment variables
VARIABLE_NAME= variable_value	Create a new variable
unset	Remove a variable
export Variable=value	To set value of an environment variable
sudo adduser username	To add a new user
sudo passwd -l 'username'	To change the password of a user
sudo userdel -r 'username'	To remove a newly created user with their home directory
sudo usermod -a -G GROUPNAME USERNAME	To add a user to a group
sudo deluser USER GROUPNAME	To remove a user from a group
finger	Shows information of all the users logged in
finger username	Gives information of a particular user
bg	To send a process to the background
fg	To run a stopped process in the foreground
top	Details on all active processes
ps	Give the status of processes running for a user
ps PID	Give the status of a particular process
pidof	Gives the Process ID (PID) of a process

Command	Description
`kill PID`	Kills a process
`nice`	Starts a process with a given priority
`renice`	Changes priority of an already running process
`df`	Gives free hard disk space on your system
`free`	Gives free RAM on your system