

**CyberSecurity Discussion: Basics 01 | Linux Command Line**

# THE ROAD TO ETHICAL HACKING

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# <WHY THE LINUX COMMAND LINE? >

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- Benefits?
  - Graphical User Interface takes up a lot of resources, may load very slow?
  - Being able to write scripts than can later be used.
    - Macros, small programs. Increases Productivity.
- Too Many Fancy IDE's
- Command Line is fast, and very powerful.
  - I can delete my entire file system with line of commands. Do not try this at home!!!
    - `rm -rf /`
      - -r = recursively , f = force



# VERY IMPORTANT

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- **Command line is case sensitive**
  - `ls` is not the same as `Ls` capitalization matters.
- **Always wear protection**
  - Do not use `su` super user command, do not elevate your privileges unless you have to use `sudo` to elevate privileges temporally, this also limits what you can do.
  - Use a virtual machine. (VirtualBox, VMware)
- **Linux does not discriminate.**
  - Linux assumes you know what you are doing, if you break you pay the price
  - Create snapshots when playing around, `cp` copy command very useful.

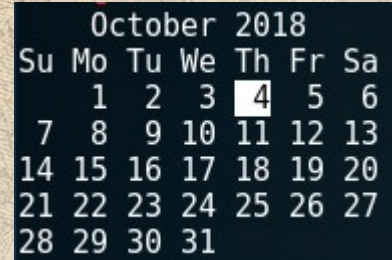


# LIVING INSIDE THE COMMAND LINE

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- **cal**

- Displays a Calendar



October 2018						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- **date**

- Displays the day.
  - Thu Oct 4 09:25:06 DST 2018

- Stroke: **ctrl-c**

- Stops the current command running. Use when one is stuck, or command requires input.
  - **rm -rf \**
    - requires extra input, REMEMBER \ Backslash, / Forwardslash



# GENERAL FORMAT

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- **Format**
  - **command -options arguments**
- **There** are many options, options may be written as, “-ab..”
- Use the --help to get options





# LISTING CURRENT DIRECTORY

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- ls
  - ls --help
    - Displays information about command.
  - ls -l
    - -l stand for long, this show more information regarding the files.



# MAKING DIRECTORIES & REMOVING

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- **mkdir**
  - make a directory. Ex **mkdir fileUno**
  - Make more than one directory. Ex **mkdir fileUno fileDos fileTres**
- **rm**
  - remove a directory
    - **rm fileUno**
      - Error
      - use **-r** (recursively)



# THE IMPORTANCE OF I AND V

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- **-i** or **--interactive**
  - When running a command with this option such as `rm -ri fileUno`
    - **-r** (recursively) is required since fileUno is a file). Not required otherwise.
- Without the **-i** option files are deleted or made without feedback.
  - Deleting important files.
  - Running scripts that deal with sensitive information.
- **-v** or **--verbose**
  - Information is provided as command or script runs.



# CHANGING DIRECTORIES & WHERE AM I

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- `cd`
  - Change directory. Example `cd fileUno.`
  - `cd ..` Back one directory
  - `cd ~` home directory
- `pwd`
  - Print working directory.
  - Find out where you are at.



# MANUAL

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- **man**
  - The manual, this shows information regarding commands.
  - **man** command



# TO SU OR NOT TO SU, DO SUDO

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- **su**
  - Change user or elevate privileges to super user.
- **sudo**
  - Temporarily elevate your privileges.
- **sudoers**
  - list of users allowed to escalate their privileges.
  - `/etc/sudoers`



# SSH (SECURE SHELL)

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- SSH into University of California, Merced
  - Use bash (Linux) or putty (windows)
  - Linux Command line: `ssh username@hostName`
  - username: Email
  - HostName: `engapps00.ucmerced.edu`
  - Example: `ssh rgonzalez69@engapps00.ucmerced.edu`



THANK YOU

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