# NSE - $LAB_1$

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## 1 Understanding Basic Linux Commands

- **Global sudo** use command *sudo -s*
- **Current Date** use command *date*
- **Use manual** use command *man*
- **To print first 5 lines** use command *head -5 /file/directory*
- **To print last 5 lines** use command *tail -5 /file/directory*
- **Global sudo** use command *sudo -s*

## 2 Permissions on file

-rw-r–r– 1 ns staff 0 12 Feb 17:44 file.txt

- Left most bit: its - indicating that it is a plain file (-)
- Next 3 left-most bits: current user permission, in this example I can **read** and **write** but not **execute**.
- last 3 bits: others who are not in the group, in this example they can only **read** but not **execute** or **write**. **write**

# 3 Composing Basic linux commands

- **read file** use command *ls — cut — head — tail*
- **you can use cut to display wanted data**
  use command *cut -f for the fields and -d ':' for example for : delimiter*
- **The above can return many duplicates to remove them, pipe the output with uniq command**
  use command *cut -f7 -d':' /etc/passwd PIPE uniq*
- **But even with piped uniq we still get duplicates, because uniq isnist on data to be ordered so we need to pipe sort first**
  use command *cut -f7 -d':' /etc/passwd PIPE sort PIPE uniq*
- **stream OUTPUT** use command
  *ls /etc/password 1¿ or ¿ /logfile*
  This can be used to display both OUTPUT and ERROR
- **stream ERROR** use command
  *ls /etc/password 2¿ /logfile*
  This can be used to redirect output without showing the error
- **Otherwise display echo message** use command
  *ls /etc/password —— echo "file, not found"*
  This can be used to redirect output without showing the error
- **It's always good to check if file exists before performing operation on it so** use command
  *ls /etc/password AND cut -f7 -d':' /etc/passwd*
  This ensures the file exists before the cut

We can also execute the .txt files, by passing them into shell input. Because we can't execute the .txt file itself without changing the permission to **executable** with *chmod* command.

To add executable permissioms we use *chmod u+x file.txt*
This command changes mode of user and appends the executable permission to it, followed by file name. This allows user to execute the file rather then passing it to the shell.

This is the end of Lab 1, showing basics of linux before we jump into hacking.