

# Linux



## Introduction to Linux

### Module 1: Basic commands to survive



# Basic Commands to Survive



In this module we will be working through some of the foundation commands that will allow you to navigate the file system – the basic tools you will use daily in your work.



# Some Basic Linux Commands



Command	Comments	Real Life Usage
<b>pwd</b>	“print working directory” – this will tell you where you currently are in the file system	Always a good check before running any kind of script or command in the environment – make sure you are in a safe place!
<b>cd</b> <b>cd /</b> <b>cd ~</b>	“change directory” – cd is your command to get you around the file system. We have used the / as an example here, this is the top of your file system or the root folder cd ~ will automatically take you back to the home directory of the user you are currently running as	This is how you get everywhere around the file system  The / and ~ commands are extremely useful to help you quickly navigate to root and your home directory
<b>cd ..</b>	The .. are also helpful shortcuts to navigate the file system letting you go back one directory level	These commands mean you do not have to fully qualify a path when navigating the system
<b>cd /home/user</b>	This is a fully qualified path – i.e., specified from root	This will take you to the /home/user location



# Some Basic Linux Commands – ls



The **ls** command is one of the most important commands you will use – and it is likely you will use several options with it. In practical terms, this is your way to list what is in a location of your choice.

**ls**

Listing directory contents – when run on its own it will simply list the contents of the directory where you currently are

**ls -l**

Now we run the command with an option here of **-l** – this will give us more info about the contents of the current directory (the **l** here stands for long listing)

**ls -ltr**

A combination of options for the **ls** command that are extremely useful. The **l** will give us the long listing, the **t** will sort by modification time (with the newest first), and **r** will reverse the order so that the newest appears at the bottom. Useful for large directories

**ls -l /**

You can also use the **ls** command to list the contents of another location without having to relocate to that place in the filesystem – simply specify the location after the command



# Absolute and Relative Paths



## Path

- File(s)
- Folder(s)
- Folder(s)/File(s)

## Absolute Path

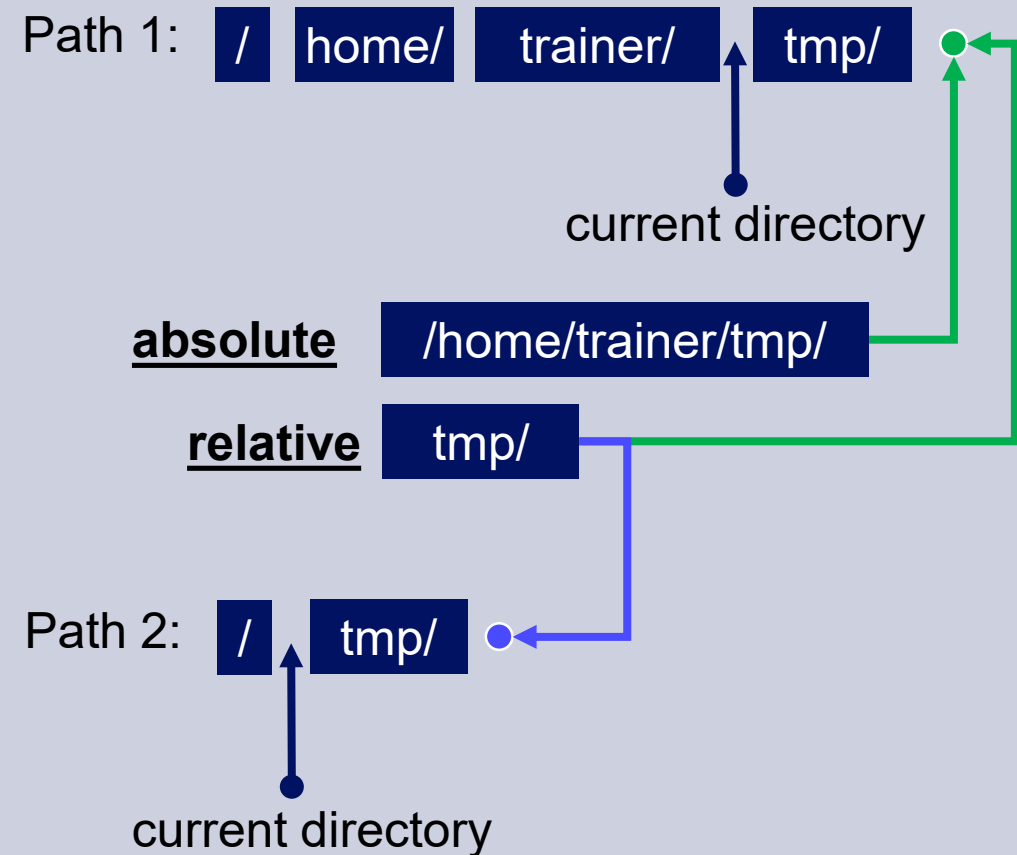
Full address for the file or directory

Can be accessed from anywhere

## Relative Path

Path is relative to the current location

Path changes from different locations



# Basic Commands – man



The man command is your useful help guide located on your server – this will allow you to see what a command does, and the various options you have when running it.

Simply type **man <command>**

```
ec2-user@ip-172-31-40-21:~  
LS(1) User Commands LS(1)  
NAME  
ls - list directory contents  
SYNOPSIS  
ls [OPTION]... [FILE]...  
DESCRIPTION  
List information about the FILES (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.  
Mandatory arguments to long options are mandatory for short options too.  
-a, --all  
do not ignore entries starting with .  
-A, --almost-all  
do not list implied . and ..  
--author  
with -l, print the author of each file  
-b, --escape  
print C-style escapes for nongraphic characters  
--block-size=SIZE  
scale sizes by SIZE before printing them; e.g., '--block-size=M' prints sizes in units of 1,048,576 bytes; see SIZE format below  
-B, --ignore-backups  
do not list implied entries ending with ~  
-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by  
ctime, newest first  
-C list entries by columns  
--color[=WHEN]  
colorize the output; WHEN can be 'never', 'auto', or 'always' (the default); more info below  
-d, --directory  
list directories themselves, not their contents  
-D, --dired  
generate output designed for Emacs' dired mode  
-f do not sort, enable -aU, disable -ls --color  
-F, --classify  
append indicator (one of */=>@|) to entries  
--file-type  
likewise, except do not append '*'  
--format=WORD  
across -x, commas -m, horizontal -x, long -l, single-column -l, verbose -l, vertical -C  
Manual page ls(1) line 1 (press h for help or q to quit)
```



# Some Basic Linux Commands



Command	Comments	Real Life Usage
<b>uname</b> <b>uname -a</b>	uname will simply print out system information to your screen uname -a will show you all the info	Useful if you need to look up what version of the OS you are running
<b>history</b>	This will show you a full list of the commands (including typos!) that you have run since starting the session	Very useful if you need to go back and run something that you did previously and you do not remember the syntax – it will also help you track down any erroneous commands you might have run
<b>&lt;tab&gt;</b>	Using the tab key is a handy shortcut to get the system to finish the line for you	If you are trying to type out a pathname and want the OS to do more of the work, you can press tab and it will fill in the blank (if there is one option available)
<b>&lt;up&gt;</b>	Pressing the up key on the command prompt will let you run step by step through the recent commands you have run	Useful if you want to run commands again that you have run recently
<b>&lt;highlight&gt;</b>	Highlighting text in your PuTTY window will automatically copy it to the clipboard	This will allow you to copy things; if you wish to paste into the PuTTY window, use the right mouse button