Navigating in UNIX

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1 Works for me This protocol is published without a DOI.

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ABSTRACT

Navigating the file system in UNIX via the command line is not intutive at first glance compared to a point and click windows-style interface. However once you understand the heirachical nature of the file system and how to navigate relative to where you are or from the root of teh file system it becomes almost second nature.
There are 3 basic commands for navigating the filesystem

PROTOCOL CITATION

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Basic Navigation

1 Where on earth am I?

Present Working Directory

pwd

Linux

Short for 'present working directory'. This will show you your current location as an absolute (more on what this means below). For example:

/home/anthony/data

2 What's in my current location?

List

ls

Linux

Detailed list showing time stamps and permissions

ls -l

Linux

Detailed list showing hidden files beginning with '.' such as the .ssh directory

ls -la

Linux

Detailed list showing the items created most recently at the bottom 'tr' for reverse sort by time

ls -ltr

Linux

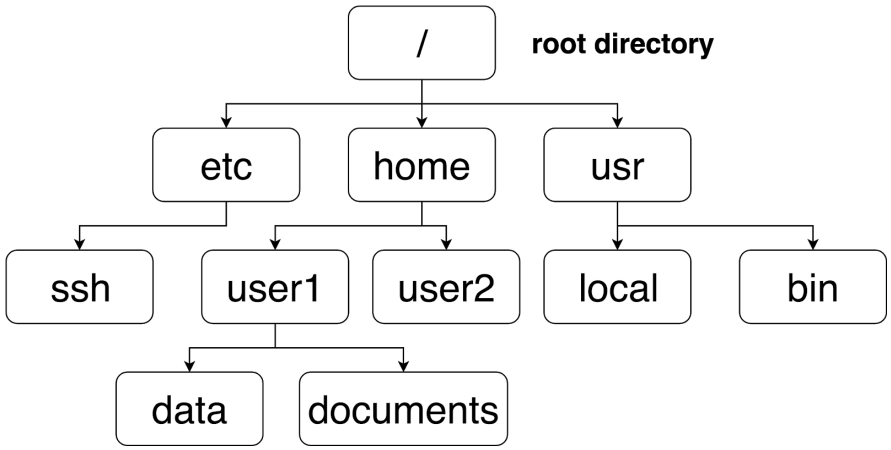
3 Get me out of here!

Change directory

cd

Linux

This will change your location to the path specified after the cd command. The path can be either absolute or relative.
To explain the difference look at the example file tree shown below.



An **absolute** path always starts from the root directory which in UNIX is represented by a /

Therefore the absolute path to the data directory of user1 is

/home/user1/data

The absolute path to the bin directory is

/usr/bin

Therefore to change directories to these place **no matter where you are** youcan type
cd /home/user1/data or **cd /usr/bin** respectively.

A **relative** path is a location starting from the current working directory and does **not** start with a /.
If you need to go back up a directory you type .. which stands for up a level into the parent directory.
Therefore if you are in the directory /home/user1

- to navigate to the data directory you would type

  cd data

- to navigate to user2 directory you would type

  cd ../user2

  This navigates up a level in the tree to home and then down into user2

If your present working directory is /usr/bin to navigate to the user 1 documents directory you could

- use the absolute path

  cd /home/user1/documents

- Use the relative path

  cd ../../home/user1/documents

back up to usr then to / and then down into home then user and finally documents.

Useful commands

- **cd** cd on its own will take you straight to your home directory /home/user1 (/Users/user1 on a mac)
- **cd -** This will take you to the directory you were previously in

4 References

- Comprehensive tutorial
- Cheatsheet