Getting Started

Learning Objectives

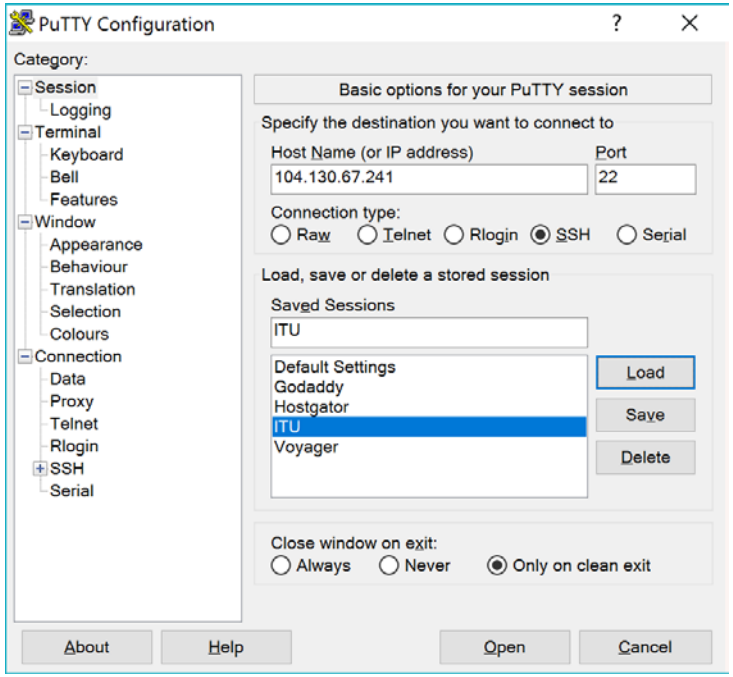
- Connect to the Linux system
- Login authentication
- Issue commands
- Find documentation
- Display system information

Accessing Linux

- Option 1 – Walk to the ACT Lab
  - Choose among Windows, Mac OS X, and Linux
- Option 2 – Remote login with Secure Shell (SSH)
  - Utility to connect to remote servers
  - Can run commands, copy files, etc.
  - Require account on remote server
  - Provide a secure, encrypted connection
  - Requires SSH client

Via SSH

- PuTTy is a free SSH client
  - Single file to download. Just run putty.exe
  - Lots of options available (generally unnecessary)
- SecureCRT
  - Download from [VanDyke Software]



Using SSH to Reach the Server

- Open terminal and type
  - `ssh csc505.itu.edu`

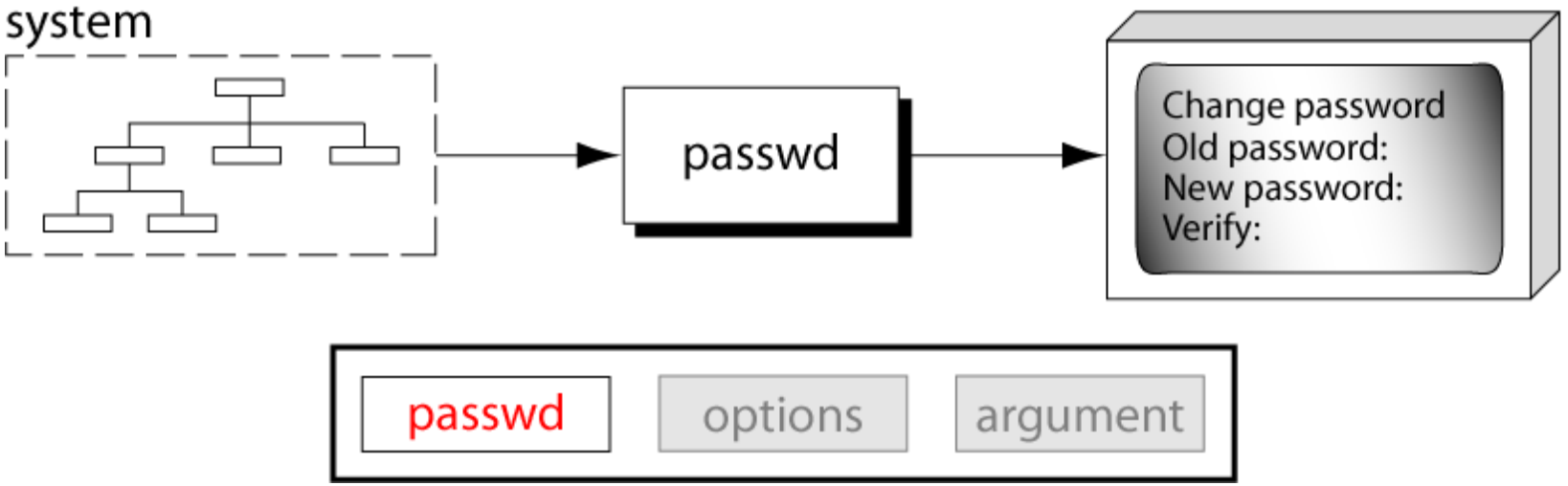
Verifying SSH Server Identity

- Must verify server identity the first time you connect
- Every server has a unique RSA fingerprint
- Generally you can trust that the server is correct. So just type “yes”
- Only will ask the first time you connect to the server, or if the server changes.

Login

- The process of identifying yourself to the system
- Linux keeps track of login activities
- Once logged in, the shell starts

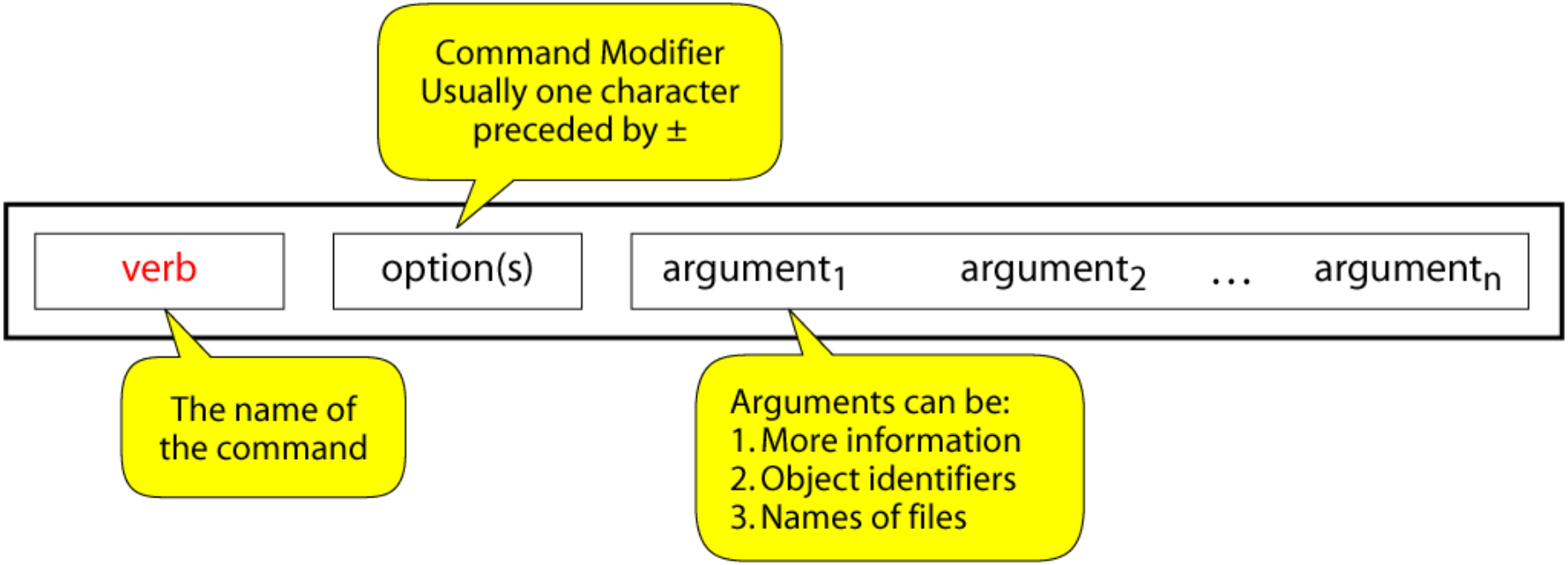
Change Password



Lowdown on Passwords

- Protect your password
- At least 6 characters long
- Choose a hard-to-guess password
- Include non-alphanumeric
- Auto generate password using pwgen

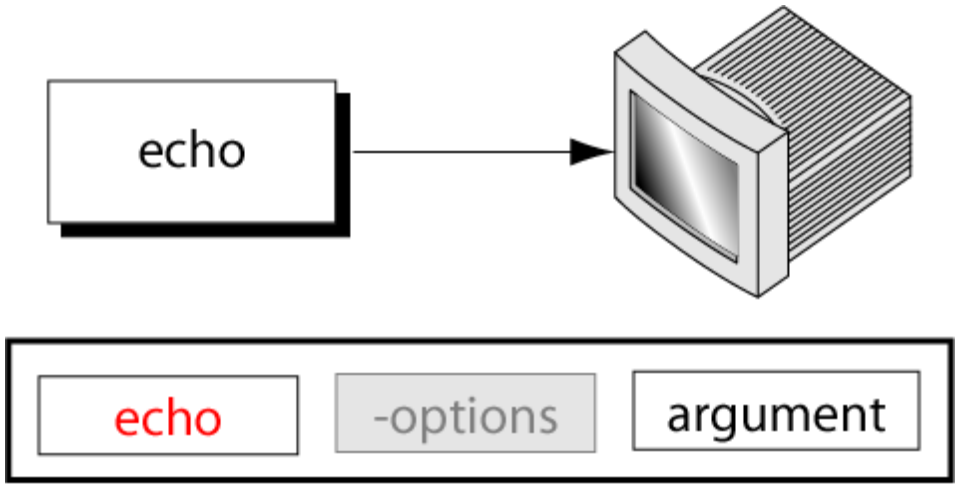
General Command Format



su/sudo Curbing Your Power

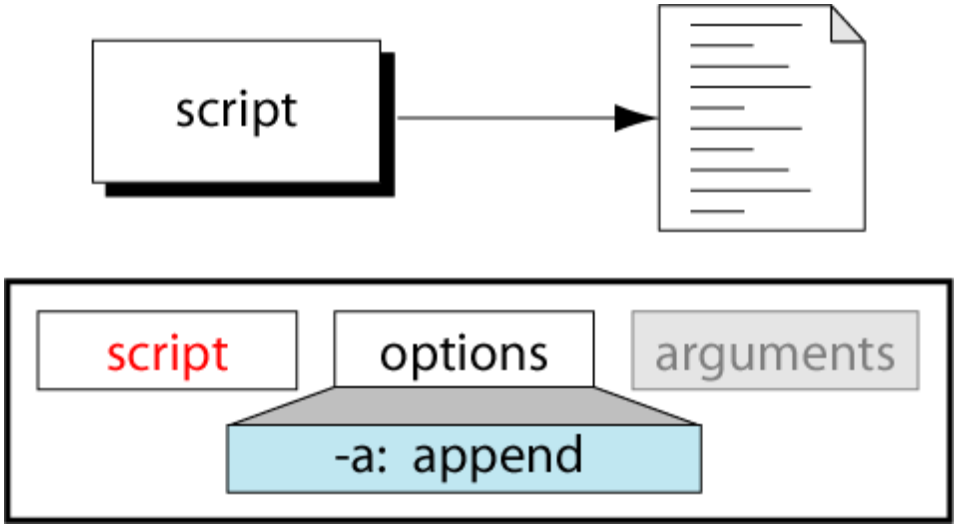
- root or superuser is a privileged user
- root can read, write, and execute files ordinary user cannot, and more
- Use su/sudo to run commands with root permission
  - su requires root passord
  - sudo requires only your password

The echo Command



- echo is one the bash builtins
- echo writes stuff to the terminal

Record a Session with `script`



Edit Command Line

- Erase a character
  - BACKSPACE
  - DEL
  - CONTROL-H
- Delete a word
- Delete a line
- Repeat a command

Some Command Line Tips

- Press <TAB> to auto complete a command, file name, etc.
- Press Up and Down to scroll through recently run commands

Abort Execution

- To terminate a running program:
  - CTRL-C
  - Or sometimes DEL

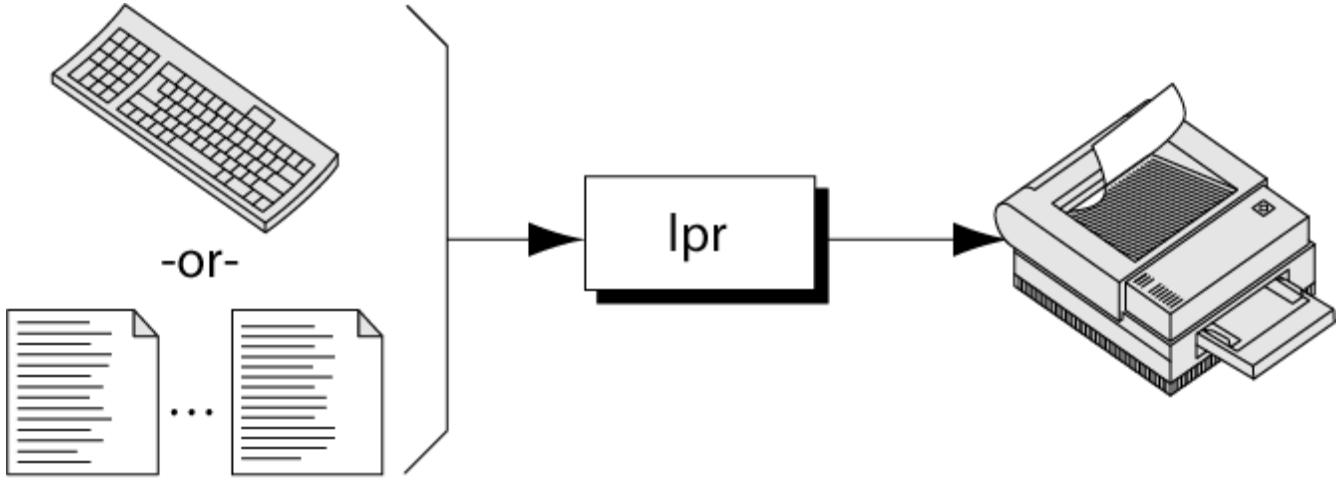
Control Key Commands

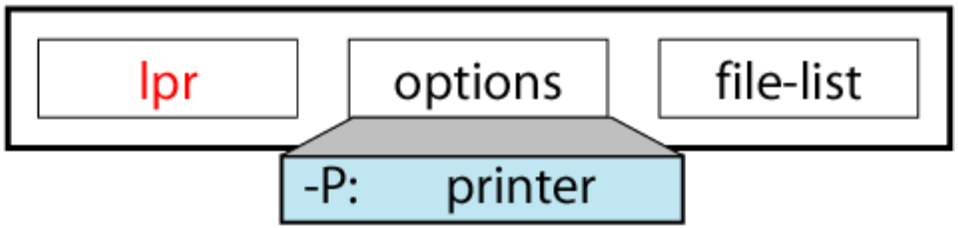
ctrl-s freezes the screen and stops any display on the screen from continuing (equivalent to a no-scroll key) (sometimes takes a moment to work)
ctrl-q un-freezes the screen and lets screen display continue
ctrl-c interrupts a running program
ctrl- same as ctrl-c but stronger (used when terminal doesn't respond)
ctrl-z suspends a running program (use the fg command to continue the program)
ctrl-h deletes last character typed
ctrl-w deletes last word typed
ctrl-u deletes last line typed
ctrl-r redraws last line typed
ctrl-d ends text input for many UNIX programs, including mail and write.

Get Help with man

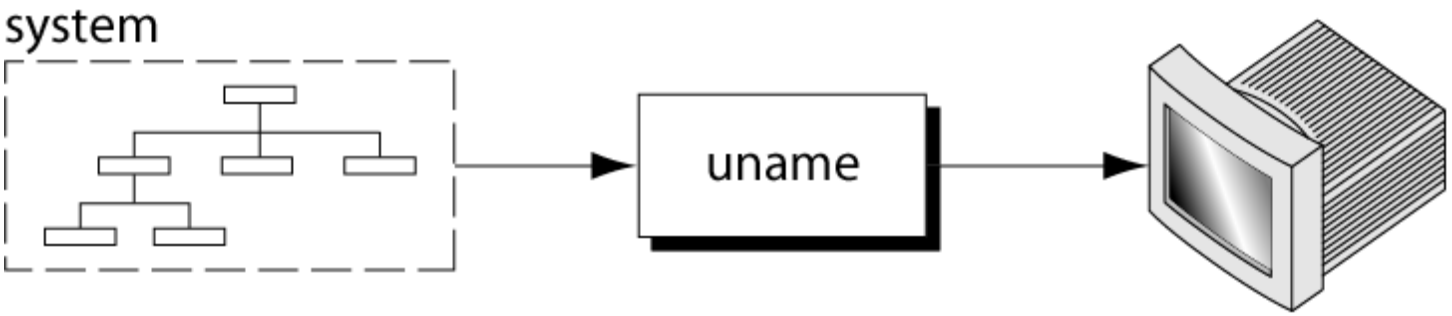
- To access a man page:
  - `man [command]`
- To find a specific man page:
  - `man -k [command]`
  - `man l [command]`
- Alternatively, use:
  - `apropos [command]`
  - `whatis [command]`

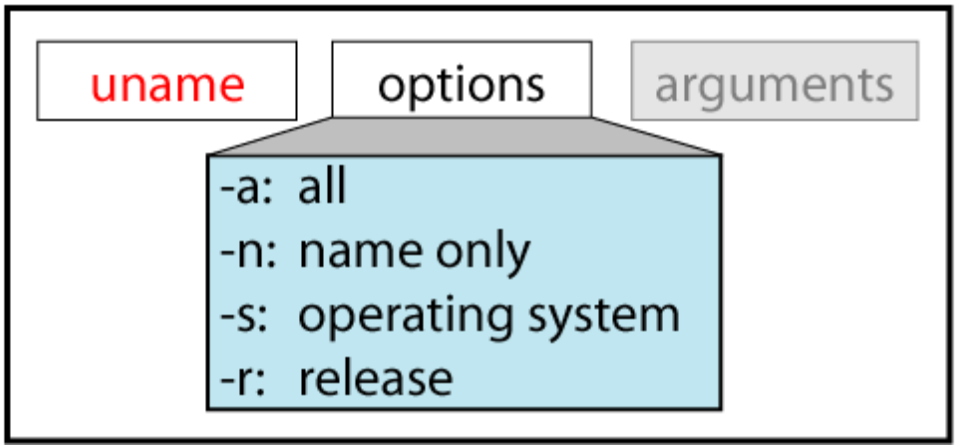
The lpr Command



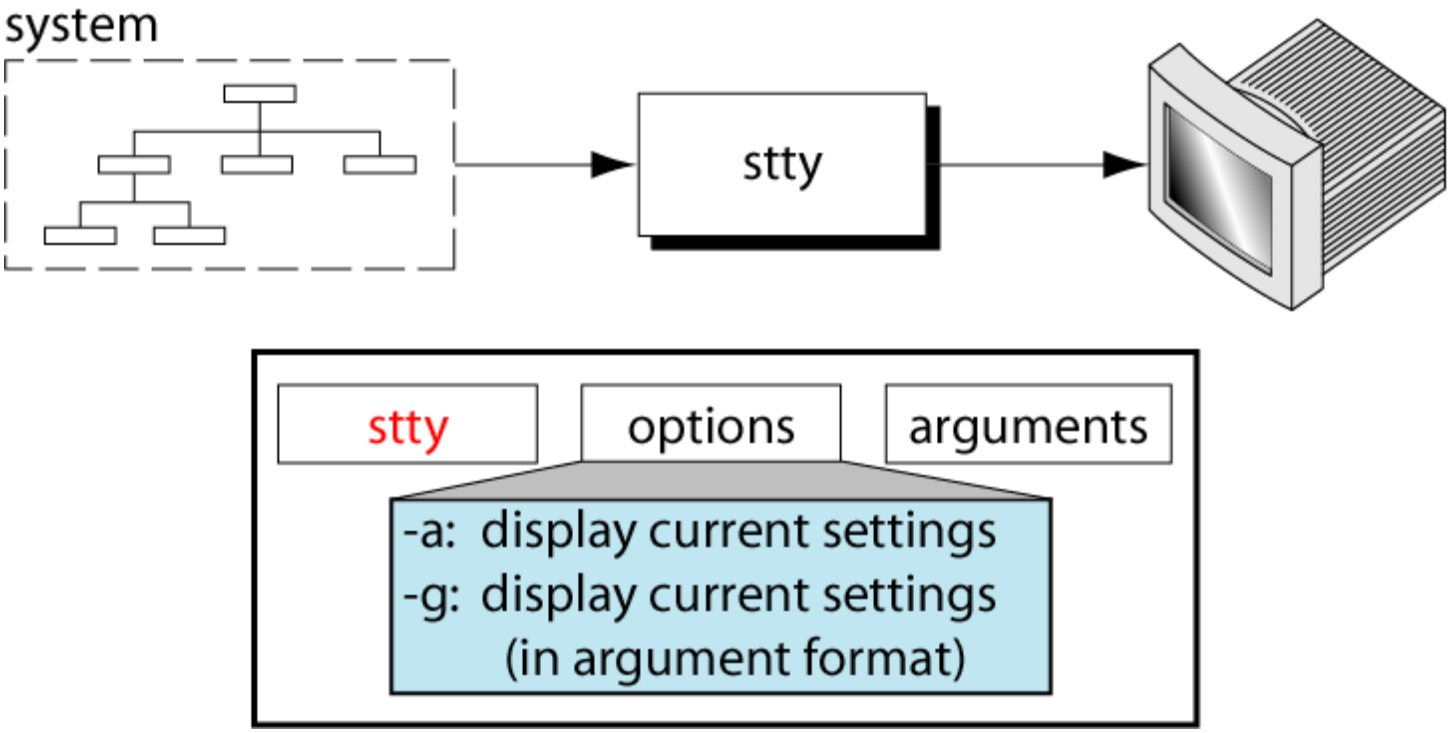


The uname Command

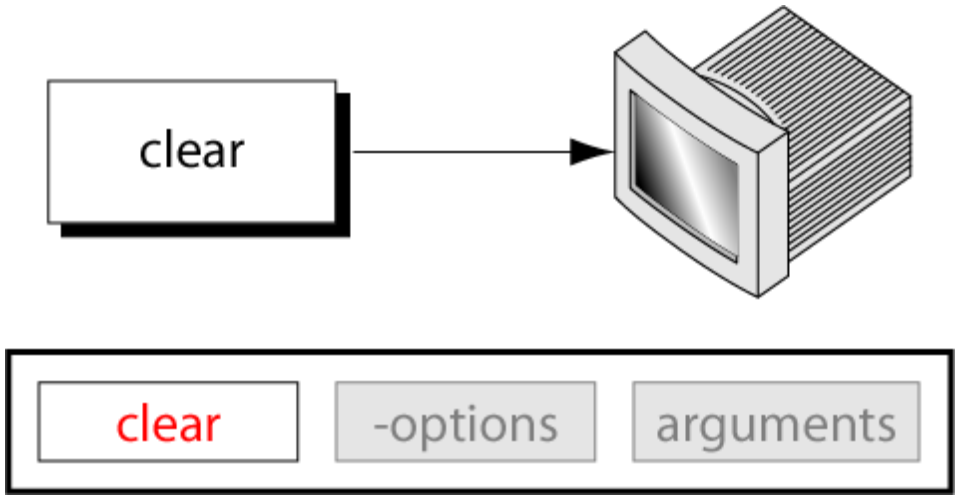




Fixing Terminal Setting with `stty`



The `clear` Command



Log Out

- `Logout` – Exit a login shell
- Or `exit`
- Or `quit`