

Introduction to the Bash shell on Linux and Mac OS

First Steps

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Overview

- Prerequisites
- Getting into the shell
- Moving around
- Looking around
- Commands and arguments
- Getting help
- History

A word of warning

- **Bash is a powertool**
- **No undelete**
- **No undo**

- **Always read your input twice before executing it**
- **Better safe than sorry**

- **Fortunately system resources are usually protected**

Prerequisites

- **Bash is the default on Mac OS and Linux**
 - No install needed
- **Embedded system or customized install**
 - Check that you are running Bash
 - But the material in this course should work for you
- **Practicing**
 - Use a “toy” system on a Virtual Machine, or:
 - Make a practice account without admin privileges

Getting into Bash on Linux

- **Use a terminal emulator**
- **Name depends on your environment**
 - Gnome: gnome-terminal
 - KDE: konsole
 - In general: look in the menu for “terminal”
 - Fallback: run “xterm”
- **Linux without X Windows**
 - You will login to the shell

Your first bash session

- **Prompt shows username, hostname and current working directory**
 - Depends on configuration

- **“cd”: Change Directory**

| | |
|---------------|---------------------------------|
| cd | move directly to home directory |
| cd somefolder | move into somefolder |
| cd .. | move one directory upwards |

- **“pwd”: Path to working directory**
- **“ls”: list contents of directory**

Check that you are using bash

- Command “echo \$BASH”
- Outputs “/bin/bash”
- Does your output not match?
 - Ask your system administrator to install bash
 - Let them set it as your default shell, or
 - Skip to “Customization” part of this course

Commands and Arguments

- A command line consists of words separated by spaces
- The first word on the input line is the *command*
- Everything after that is an argument
 - "cd Downloads"

Options

- An argument that starts with a dash is called an option

| | |
|-------------|-----------------------------------|
| ls -a | list all files (including hidden) |
| ls -l | list files in long format |
| ls -l -a | combine both a and l options |
| ls -la | combine both a and l options |
| ls -la /bin | list all in /bin in long format |

- Order of options does not matter
- Filename has to be at the end

Getting Help

- **Manual Pages**

- command: "man"
- "man ls"
- "man cd"
- "man man"

- **Using the manual pages**

- Use space to move down a page
- Move back a page with "b"
- Search with "/"
- Exit with "q"

History

- Bash keeps a history of your commands
- No need to re-enter long commands
- up and down arrow keys
 - Ctrl-p: previous
 - Ctrl-n: next

Summary

- Bash is the default shell
- Be careful!
- Prompt
- Moving around with cd
- Looking around with ls
- pwd gives current working directory
- Commands and arguments
- Man pages
- History