**Linux and Docker Exercise**

The architecture:

Key terms:

|  |  |
| --- | --- |
| Linux | Open source operating system used frequently on servers |
| Server | Computer hardware that you connect to from your computer. Typically more powerful than personal laptops, more stable, and always running. |
| Visual Studio Code |  |
| Docker |  |
| Docker image |  |
| Docker container |  |
|  |  |
|  |  |

Linux

Slides Outline:

* What is the linux server?
  + Remote hardware that we connect to for running code
* Why do we use it?
  + Faster, more stable, flexible, always on
* Dependency hell
* Docker and docker containers
* The full picture diagram
* Reasons why you should or shouldn’t use the server

Exercise

* Open github and start codespace
* Install extensions
* Git pull repo with instructions
* Basic linux commands
  + Cd and ls around the folders
  + Git status in the repo
* Docker commands
  + Docker run hello world
  + Docker pull and run rstudio container
  + Docker pull and run python container

Exercise

Basic linux commands:

|  |  |
| --- | --- |
| **Command** | **What it’s doing** |
| pwd | Print working directory you’re in |
| cd / | Change directory to the root (top level) directory |
| ls | List contents of current directory |
| cd workspaces | Change directory to ‘workspaces’ |
| ls -lath | List contents with details |
| cd codespaces-blank | Change to /workspaces/codespaces-blank directory |
| cd .. | Change directory to one level up |
| cd - | Change directory to where you were last |

Pull git