

# New Hire Notes

## General Information

### National Data Service:

- Home Page: <http://www.nationaldataservice.org/>
  - Be sure to look over the Shared Vision of Success and the Interim Charter that are linked at the bottom of the home page
  - What should NDS Provide covers in more detail services NDS hopes to offer: <http://www.nationaldataservice.org/about/provide.html>
  - Projects talks briefly about the types of projects NDS supports currently: <http://www.nationaldataservice.org/projects/>
    - NDS Labs is a project you want to read more about and get a good understanding of: <http://www.nationaldataservice.org/projects/labs.html>
    - Including the Labs Portal: <http://labsportal.nationaldataservice.org/>

### Tools:

- I'm not sure how familiar you are with container technology but if not, this is a good place to start: <https://www.docker.com/what-docker>
  - Docker-umentation: <https://docs.docker.com/>
- Jupyter is one of the programming languages we use: <http://jupyter.org/>
  - This is essentially open-source Mathematica, which accepts Python syntax instead of the Wolfram Language

## OpenStack

My OpenStack IP: 141.142.209.127

My OpenStack IPs:

- 141.142.209.135

## CoreOS

CoreOS is an **extremely** minimalistic Linux distro. It ships with etcd, docker, and fleetctl (notice: no package manager) with the main idea being that docker containers can provide any type of environment that would suit your current task.

The quick start tutorial for CoreOS can be found [here](#).

NOTE: When running docker on CoreOS from IllinoisNet (wireless only), you will need to change docker's default ip from 172.17.x.x to something that cannot be routed via DNS. **10.0.1.1/16** works well in most cases. See [Docker](#) for more information.

## Docker

[Docker.io](#) is a containerization technology that is blowing up right now in popularity.

The quick start tutorial for Docker can be found [here](#).

More information about using Docker can be found [here](#).

## Kubernetes

[Kubernetes](#) is a cluster management framework that utilizes docker containers to enforce a given configuration.

For example: a downed node will be recreated, while an extraneous node will be killed.

A quick start tutorial for a Kubernetes can be found [here](#).

More technical information can be found [here](#).

## Useful Tutorials / Discussions:

- [Jessie Frazelle's Whacky Docker Gymnastics](#)
- [Jerome P on Docker for devs](#)
- [Kelsey Hightower's series on Docker/Core/K8](#)
- [Designer of K8 great architectural overview](#)