About HICA

- Developed as part of Docker Global Hack Day 3
- Main goal is to turn Docker Images into “Executables”
  - And more, make them work as standard system executables
  - Current working directory, pipes, devices, sockets ...
- Written in Python, packaged in pip
- Documented
- SELinux Compatible
- Desktop and GPU Applications compatible
- Works with local images only, HICA will never pull an image
- Heavily based around image labels
Deep Dive

- Functionality based around so called feature injectors
  a. bind_pwd injector which bind mounts current working directory into the container
  b. xsocket injector which bind mounts the Xsocket into the container
  c. bind_home injector which bind mounts current users’ home directory into the container
  d. https://github.com/shaded-enmity/docker-hica/blob/master/docs/labels.md

- Each injector is a separate object with a well defined properties
  a. Label
  b. Command line argument override
  c. Textual description

- Command aliases for ease of use and memorability
Benefits

- Easy lifecycle management
  - Create image, remove image
  - Garbage doesn’t pile up on you hard drive
    - Installing software is easy, getting rid of it is hard
    - Curl2sudo, configure && make && make install etc.

- Simple way to use multiple versions of software
  - Need some bleeding edge version of a browser for testing?
  - Need to build something from master?

- BYODE (Bring Your Own Development Environment)
  - Save your dev environment as an image and use it wherever you like
Project Info

- URL: https://github.com/shaded-enmity/docker-hica
- Label descriptions: https://github.com/shaded-enmity/docker-hica/blob/master/docs/labels.md
- Security considerations: https://github.com/shaded-enmity/docker-hica/blob/master/docs/selinux.md
- Dockerfile guidelines: https://github.com/shaded-enmity/docker-hica/blob/master/docs/dockerfile-guidelines.md
Demo and Q&A Time!

Thank you for listening :)