Hacking Rita - Pre-Lab

Welcome!

Please note that these instructions are intended for a fresh VM or new native installation of (64-bit) Ubuntu 16.04 or 18.04.

Install Go

Upgrade to apply the latest security updates on Ubuntu:

```
$ sudo apt-get update
$ sudo apt-get -y upgrade
```

Download and extract Go archive to your `/usr/local` directory:

```
$ wget https://dl.google.com/go/go1.14.2.linux-amd64.tar.gz
$ sudo tar -xvf go1.14.2.linux-amd64.tar.gz
$ sudo mv go /usr/local
```

Add the Go executable to the PATH environment variable in your `~/.bashrc` file and activate changes:

```
$ echo -e "export PATH=$PATH:/usr/local/go/bin" >> ~/.bashrc
$ source ~/.bashrc
```

Set Up Your RITA Workspace

Create your Go workspace directory. The go_ws portion can be replaced with a name of your choice:

```
$ mkdir -p $HOME/go_ws/{bin,src}
```

Your workspace should now contain two subdirectories:

`src`: All the code and the repositories containing go code will go here.
`bin`: Executables that go compiles and installs will live here

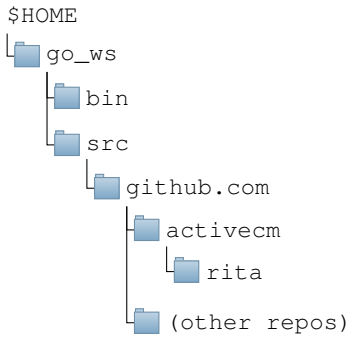
Add your new go workspace and the `/bin` subdirectory to your PATH in your `/.bashrc` file and activate changes:

```
$ echo -e "export GOPATH=$HOME/go_ws" >> ~/.bashrc
$ echo -e "export PATH=$PATH:$GOPATH/bin" >> ~/.bashrc
$ source ~/.bashrc
```

Clone the RITA repo into your workspace:

```
$ mkdir -p $HOME/go_ws/src/github.com/activecm
$ cd $HOME/go_ws/src/github.com/activecm
$ git clone https://github.com/activecm/rita.git
```

Your code layout should look similar to this:



Copy config file:

```
$  sudo mkdir /etc/rita && sudo chmod 755 /etc/rita
$  sudo mkdir -p /var/lib/rita/logs && sudo chmod -R 755 /var/lib/rita
$  sudo cp $GOPATH/src/github.com/activecm/rita/etc/rita.yaml /etc/rita/config.yaml
$  sudo chmod 666 /etc/rita/config.yaml
```

Install MongoDB

Import the public key used by the package management system:

```
$  wget -qO - https://www.mongodb.org/static/pgp/server-3.6.asc | sudo apt-key add -
```

Create a list file for MongoDB:

```
$  echo "deb [ arch=amd64,arm64 ] https://repo.mongodb.org/apt/ubuntu xenial/mongodb-org/3.6 multiverse" |
     sudo tee /etc/apt/sources.list.d/mongodb-org-3.6.list
```

Update local packages:

```
$  sudo apt-get update
```

Install MongoDB v3.6:

```
$  sudo apt-get install -y mongodb-org
```

Create data directory for MongoDB:

```
$  sudo mkdir -p /data/db
```

Install Robo3T (optional)

Download Robo3T package:

```
$  wget https://download-test.robomongo.org/linux/robo3t-1.3.1-linux-x86_64-7419c406.tar.gz
```

Create data directory for Robo3T:

```
$  sudo mkdir -p /data/robo3t
```

Extract files to new directory:

```
$ sudo tar -xvzf robo3t-1.3.1-linux-x86_64-7419c406.tar.gz -C /data/robo3t
```

Add the executable to to the PATH environment variable in your `~/.bashrc` file and activate changes:

```
$ echo "export PATH=$PATH:/data/robo3t/robo3t-1.3.1-linux-x86_64-7419c406/bin" >> ~/.bashrc
$ source ~/.bashrc
```

Install Atom (optional)

Download and install DEB file: `https://atom.io/`

Install packages: Go to Edit > Preferences > Search for and install the following package: go-plus

Development Process

Start mongo in a terminal tab
(you can make it autostart on startup, but for dev work it could be convinient to be able to easily kill it if something goes wrong):

```
$ sudo mongod
```

Start robo3t (optional):

```
$ robo3t
```

Edit the source code:

```
$ cd $GOPATH/src/github.com/activecm/rita
$ atom .
```

Build RITA from source (must be done after every change):

```
$ make
```

Run RITA:

```
$ ./rita [commands / flags / arguments / --help ]
```

NOTE: the config file in `rita/etc/rita.yaml` is the repo version. Your source build will not use it by default.
Make changes to your local config settings here:

```
$ sudo vim /etc/rita/config.yaml
```

Check out our contribution guide! Issues tagged with "good first issue" are an awesome place to start! Happy hunting!
https://github.com/activecm/rita/blob/master/Contributing.md