Process management with Foreman
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Overview
Foreman is a way to define processes for your application in code
It does not handle installing or managing dependencies.
Foreman can either run processes directly or delegate that responsibility to other Linux tools.
It was originally built by David Dollar at Heroku
Heroku leveraged Foreman to define processes you wished to run on their platform.
You should use it if...
You care about making your processes portable and reproducible across different environments.
You care about making your processes **portable** and reproducible across different environments.
You care about making your processes **portable** and **reproducible** across different environments.
Infrastructure as code is vital in a world dominated by cloud services
Getting started
name: [command]
one: [command]
two: [command]
three: [command]
web: unicorn -c config.rb
web:  unicorn -c config.rb
redis:  redis-server redis.conf
web: unicorn -p $PORT -c config.rb
foreman start
foreman start [process name]
foreman start web
foreman start -c web=2
foreman start -c web=2,redis=1
Configuration management
It’s important to separate configuration values from the codebase
Foreman uses a well known key/value syntax to define configuration values
foreman start -e .env
RAILS_ENV=production
HTTP_USERNAME=bob
HTTP_PASSWORD=secr3t
ENV[‘RAILS_ENV’]
foreman start -e .env.development
foreman start -e .env.test
Exporting
foreman export [args]
launchd
systemd
upstart
foreman export upstart
foreman export upstart \
/etc/init \
-a app
foreman export upstart \ 
/etc/init \ 
-a app \ 
-u deploy
/etc/init/app.conf
/etc/init/app-web-1.conf
/etc/init/app-web.conf
/etc/init/app-redis-1.conf
/etc/init/app-redis.conf
start app
stop  app
Usage on NHSx
NHSx is a learning platform from the NHS Leadership Academy delivering leadership development to the public sector
It is split up into services that run independent from each other
Main application (Rails)
API (Rails)
Administration (Rails)
Sidekiq
Elasticsearch
Uses the same Procfile for development, test and production
Configure overrides using command line options (such as concurrency)
web: bundle exec unicorn \
    -p $PORT \
    -c ./unicorn.rb
redis: redis-server redis.conf
workers: bundle exec sidekiq
start nhsx
Integrate with AWS
Many options for instrumenting Foreman into your deployment workflow
OpsWorks
Capistrano
Capistrano
after 'deploy:published',
'foreman:export'
task :export do
  on roles(:app) do
    within current_path do
      # ...export here
    end
  end
end
sudo '/usr/bin/bundle exec foreman export upstart /etc/init -a nhsx -u deploy'
task :start do
  on roles(:app) do
    sudo 'start nhsx'
  end
end
Further reading
http://goo.gl/05eaeV
http://goo.gl/Z1YmN1
Thank you
Questions?