

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 services
directly or delegate that
responsibility to other linux tools

It was originally built by
David Dollar at Heroku

Heroku leveraged Foreman to
define services you wished to
run on their platform

You should use it if...

You care about making your
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services **portable** and **reproducible**
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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

Redis

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 nhsv

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/BXHdyL>

<http://goo.gl/05eaeV>

Thank you

Questions?