

# Phoenix in the Cloud

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# Cloud Deployment

For certain values of Cloud

- Heroku
- Cloud Foundry

# Heroku

- Free plan
  - 1 web dyno
  - 1 worker dyno
  - PostgreSQL
  - Redis

# Heroku

- Super easy deploy
- Easy to get started
- But slow to start the app on free plan
- And expensive to scale up

# Getting Started with Heroku

- Git repo with Phoenix app
- Install toolbelt (<https://toolbelt.heroku.com/>)

# Create Heroku app

```
$ heroku create --buildpack "https://github.com/HashNuke/heroku-buildpack-elixir.git"
```

```
Creating mysterious-meadow-6277... done, stack is cedar-14  
Buildpack set. Next release on mysterious-meadow-6277 will use https://github.com/HashNuke/heroku-buildpack-elixir.git.  
https://mysterious-meadow-6277.herokuapp.com/ | https://git.heroku.com/mysterious-meadow-6277.git  
Git remote heroku added
```

# Add static buildpack

```
$ heroku buildpacks:add https://github.com/gjaldon/heroku-buildpack-phoenix-static.git
```

Buildpack added. Next release on mysterious-meadow-6277 will use:

1. <https://github.com/HashNuke/heroku-buildpack-elixir.git>
2. <https://github.com/gjaldon/heroku-buildpack-phoenix-static.git>

Run ``git push heroku master`` to create a new release using these buildpacks.

# Use environment variables

12 factor apps are configured via env vars

- <http://12factor.net/>

```
System.get_env("MY_SPECIAL_ENV_VAR")
```



# config/prod.exs

```
config :hello_phoenix, HelloPhoenix.Endpoint,  
  http: [port: {:system, "PORT"}],  
  url: [host: "example.com", port: 80],  
  cache_static_manifest: "priv/static/manifest.json",  
  
  # retrieve environment variable  
  secret_key_base: System.get_env("SECRET_KEY_BASE")
```

# config/prod.exs

```
# Configure your database
config :hello_phoenix, HelloPhoenix.Repo,
  adapter: Ecto.Adapters.Postgres,

  # retrieve environment variable
  url: System.get_env("DATABASE_URL"),

  pool_size: 20,
  ssl: true
```

# config/prod.exs

Replace:

```
url: [host: "example.com", port: 80],
```

with:

```
url: [scheme: "https", host: "mysterious-meadow-6277.herokuapp.com", port: 443],  
force_ssl: [rewrite_on: [:x_forwarded_proto]],
```

# Other things to remember

- Reduce websocket timeout below herokus 55s limit
- Add DB:

```
heroku addons:create heroku-postgresql:hobby-dev
```

# Set secret key base env var

```
$ mix phoenix.gen.secret
```

```
xvafzY4y01jYuzLm3ecJqo008dVnU3CN4f+MamNd1Zue4pXvfvUjbiXT8akaIF53
```

```
$ heroku config:set SECRET_KEY_BASE="xvafzY4y01jYuzLm3ecJqo008dVnU3CN4f+MamNd1Zue4pXvfvUjbiXT8akaIF53"
```

```
Setting config vars and restarting mysterious-meadow-6277... done, v3
```

```
SECRET_KEY_BASE: xvafzY4y01jYuzLm3ecJqo008dVnU3CN4f+MamNd1Zue4pXvfvUjbiXT8akaIF53
```

# Deploy!

```
$ git push heroku master
```

```
Counting objects: 55, done.
```

```
Delta compression using up to 8 threads.
```

```
Compressing objects: 100% (49/49), done.
```

```
Writing objects: 100% (55/55), 48.48 KiB | 0 bytes/s, done.
```

```
Total 55 (delta 1), reused 0 (delta 0)
```

```
remote: Compressing source files... done.
```

```
remote: Building source:
```

```
remote:
```

```
remote: -----> Multipack app detected
```

```
remote: -----> Fetching custom git buildpack... done
```

```
remote: -----> elixir app detected
```

```
remote: -----> Checking Erlang and Elixir versions
```

```
...
```

# CloudFoundry Deployment

- Uses similar buildpacks
- Deploy with CF CLI
- <https://github.com/DylanGriffith/cloudfoundry-phoenix>

# Quick start

```
$ cf push APPNAME -b https://github.com/joshprice/cloudfoundry-buildpack-elixir
```

- uses default config of buildpack
- uses default start command ie. `mix phoenix.server`
- uses default for instances and mem/disk



# Add a manifest file

```
---  
instances: 1  
memory: 128M  
disk_quota: 512M  
buildpack: https://github.com/joshprice/cloudfoundry-buildpack-elixir  
command: mix phoenix.server
```

# elixir\_buildpack.config

```
erlang_version=18.2.1  
elixir_version=1.2.4  
always_rebuild=false
```

- My buildpack has the latest as the default

# Don't upload everything

- Add a `.cignore` file

```
$ cp .gitignore .cignore
```

- Protip: don't upload `node_modules`

# Buildpack internals tour

Oh my goodness it's full of shell scripts!

# Resources

- <http://www.phoenixframework.org/docs/heroku>
- <https://github.com/DylanGriffith/cloudfoundry-phoenix>
- <https://github.com/HashNuke/heroku-buildpack-elixir>
- <https://github.com/gjaldon/heroku-buildpack-phoenix-static>
- <https://github.com/gogolok/cloudfoundry-buildpack-elixir>
- <https://github.com/joshprice/cloudfoundry-buildpack-elixir>

# Questions?