

Deploying to Heroku

tinyurl.com/heroku100

GitHub Pages

- Lets us host static websites (including static ReactJS apps)
- Does not let us run node applications (e.g., server code in `app.js`)
- Does not let us run commands (e.g. to install dependencies)
- Does not provide database hosting

Heroku

- Another popular hosting provider
- Lets us host and run node apps (and apps written in other languages too!)
- Lets us run commands (e.g., install dependencies)
- Lets us host databases
- ...

Other Services

- Amazon Web Services
- Google Cloud Engine
- Microsoft Azure
- DigitalOcean
- ...

Getting Started

1. Create a Heroku account at signup.heroku.com
2. Install Heroku CLI devcenter.heroku.com/articles/heroku-cli
3. Install create-react-app github.com/facebook/create-react-app
4. Create a new GitHub repository

Folder Structure

- `app.js` contains backend code (runs on the server)
- `client/` folder contains client-side code and assets (uses ReactJS)
- `package.json` contains dependencies and other metadata
- You might see other conventions too

Dev Environment

- Install dependencies by running `npm install` (or `npm i` for short)
- Start server by running `node app.js`
- Start a static server
 - Configured to be restarted automatically on save
 - `cd` into `client/`
 - Run `npm start`

package.json

```
{  
  ...  
  "scripts": {  
    "dev": "node app.js & && cd client && npm start"  
  },  
  ...  
}
```



```
package.json
```

```
{  
  ...  
  "proxy": "http://localhost:4000",  
  ...  
}
```

Demo

app.js

client/

client/

```
$ mkdir client
```

```
$ cd client
```

```
$ npx create-react-app . # Create boilerplate ReactJS app
```

```
$ npm start # Start static server
```

proxy

React Router DOM

Production Environment

- Install dependencies by running `npm install` (or `npm i` for short)
- Build ReactJS app
- Start server by running `node app.js`
 - Expose API
 - Serve static files (include ReactJS app)

scripts

Heroku App

Heroku App

```
$ heroku login
```

Heroku App

```
$ heroku login
```

```
$ heroku apps:create
```

Heroku App

```
$ heroku login
```

```
$ heroku apps:create
```

```
$ git push heroku master # Heroku creates separate remote
```

Heroku App

```
$ heroku login
```

```
$ heroku apps:create
```

```
$ git push heroku master # Heroku creates separate remote
```

```
$ heroku open
```

Heroku App

```
$ heroku config:set VARNAME=VALUE
```

Heroku App

```
$ heroku config:set VARNAME=VALUE
```

```
$ heroku --help
```

```
$ heroku COMMAND --help
```


Continuous Deployment

Databases

Databases

- MySQL: elements.heroku.com/addons/cleardb
- PostgreSQL: elements.heroku.com/addons/heroku-postgresql
- elements.heroku.com/addons

Databases

- MySQL: dev.mysql.com/doc/mysql-installation-excerpt/5.7/en/
- PostgreSQL: www.postgresql.org/download/

Express Database Integrations

- MySQL: expressjs.com/en/guide/database-integration.html#mysql
- PostgreSQL: expressjs.com/en/guide/database-integration.html#postgresql
- expressjs.com/en/guide/database-integration.html

Heroku Docs

devcenter.heroku.com/categories/reference

Deploying to Heroku

tinyurl.com/heroku100