

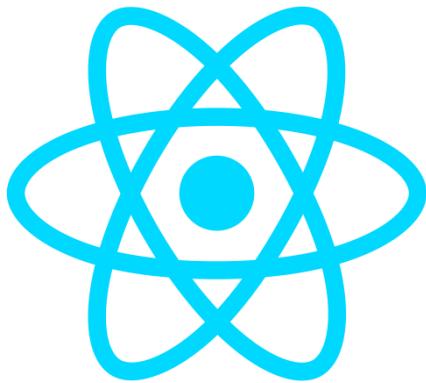
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Deploying a React App to Google Cloud Platform using App Engine

Create and deploy a React app to Google Cloud Platform from scratch in less than five minutes



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Nov 19, 2019 · 4 min read ★



Prerequisites:

- [Node](#)
- An activated [Google Cloud Platform](#) account
- [gcloud CLI](#)

To get started, use npx to generate a new React app using [create-react-app](#):

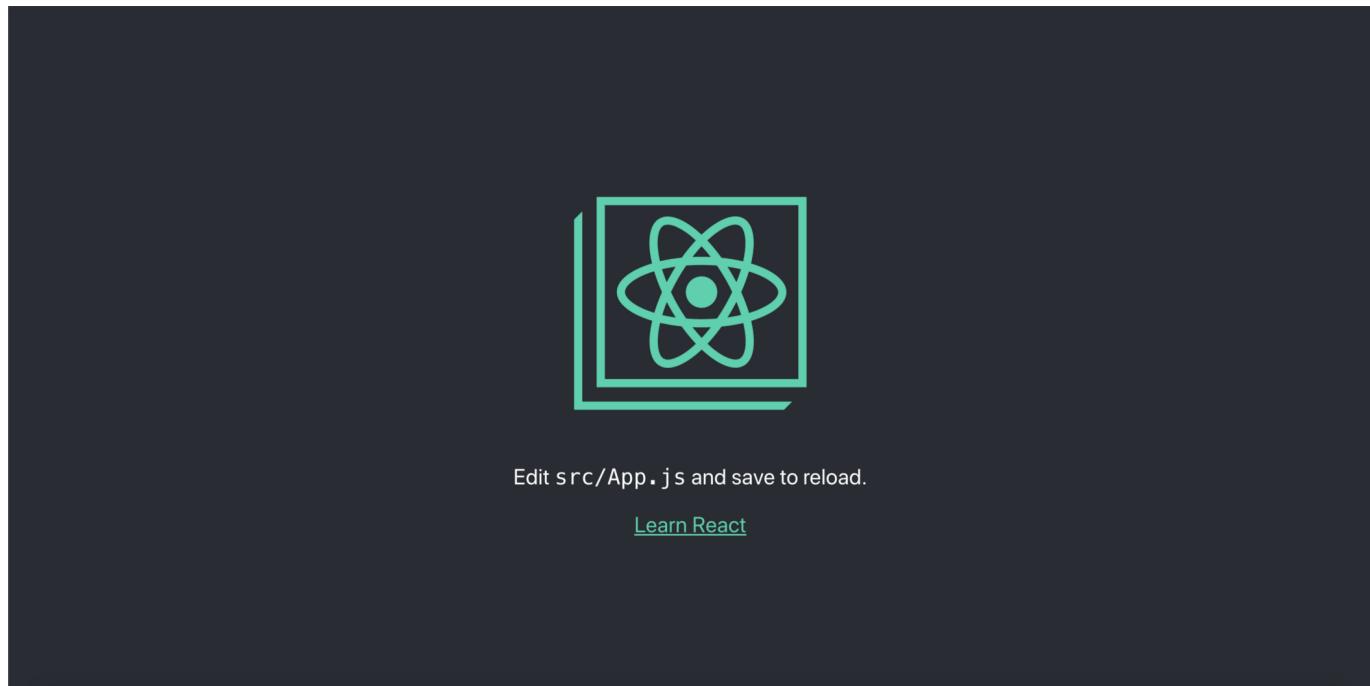
```
npx create-react-app <app-name>
```

Once npx has generated all the necessary files for your React app, let's make sure it runs fine by doing:

```
cd <app-name>
npm start
```

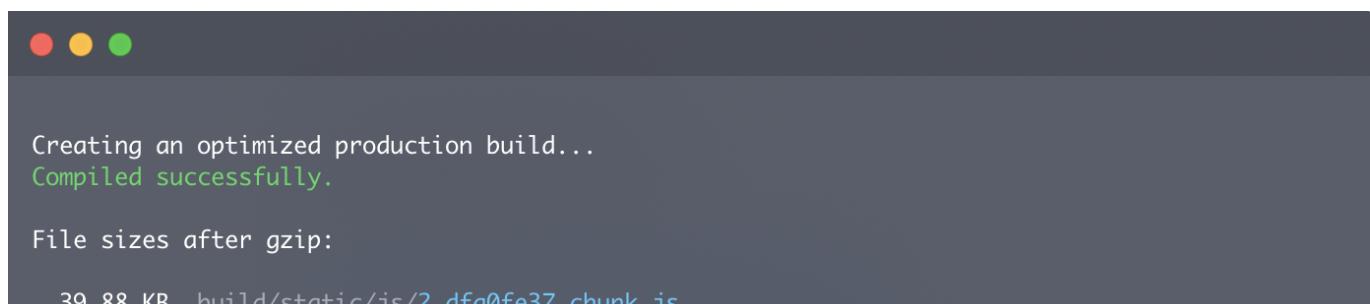
In your favorite browser, navigate to <http://localhost:3000>

You should see a screen similar to this one:



Now that your app is up and running, let's create a production build out of it. To do so, simply run:

```
npm run build
```



```
779 B    build/static/js/runtime-main.f711aedb.js
617 B    build/static/js/main.41cb179e.chunk.js
417 B    build/static/css/main.b100e6da.chunk.css
```

The project was built assuming it is hosted at the server root.
 You can control this with the `homepage` field in your `package.json`.
 For example, add this to build it for GitHub Pages:

```
"homepage" : "http://myname.github.io/myapp",
```

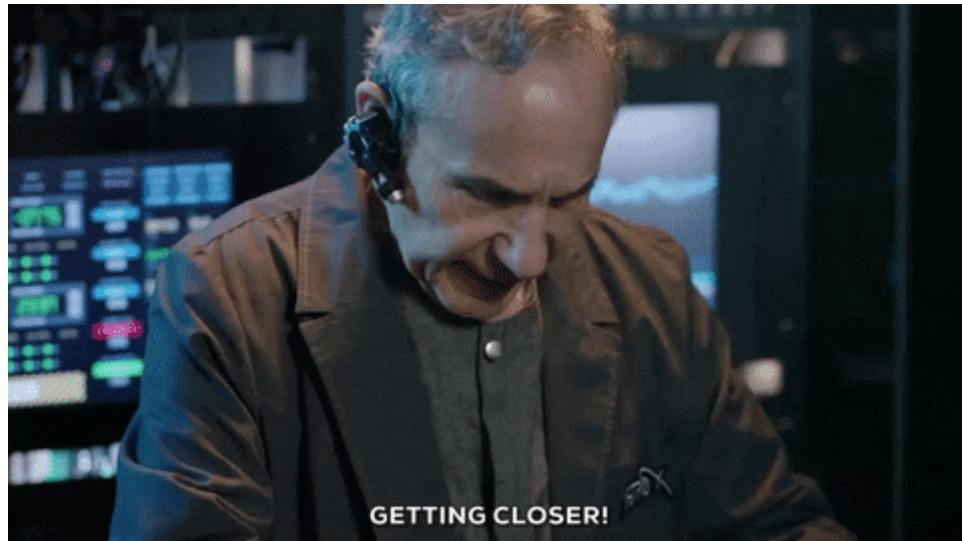
The `build` folder is ready to be deployed.
 You may serve it with a static server:

```
yarn global add serve
serve -s build
```

Find out more about deployment here:

<https://bit.ly/CRA-deploy>

At this point, there is nothing left to do from a React perspective. The next step is to configure a new project in the App Engine. Then, all that is left to do is to use the Google Cloud SDK to deploy our freshly built React app to GCP.



Here is a series of screenshots that will walk you through how to do the first part: configure a new project in the GCP App Engine.

A screenshot of the Google Cloud Platform interface. At the top, there's a blue header bar with the text "Google Cloud Platform" and "My First Project". Below the header, the "App Engine" service is selected. The main content area has a large blue banner on the left with the text "Welcome to App Engine" and "Build scalable apps in any language on Google's infrastructure". To the right of the banner, there's a white box titled "Hello World" with the subtext "New to App Engine? Start with a simple 'Hello World' app to learn the essentials." and "Time: 10 minutes". Below this, there's a "START TUTORIAL" button. The overall layout is clean and modern, typical of Google's web-based tools.

The screenshot shows a section of a web page titled "Deploying a React App to Google Cloud Platform using Google App Engine | Better Programming". At the top, there is a "Create Application" button, which is highlighted with a red circle. To the right of this button, there is a "Deploy via command line" section containing a terminal window with the command "gcloud app deploy" and a "DOWNLOAD THE SDK" link.

The screenshot shows the first step of the "Create app" wizard in the Google Cloud Platform. The user has selected the "us-central" region. At the bottom of the screen, there is a "Create app" button, which is highlighted with a red circle. There is also a "Cancel" button next to it.

The screenshot shows the second step of the "Create app" wizard. The user has selected "Node.js" as the language and "Standard" as the environment. At the bottom of the screen, there is a "Next" button, which is highlighted with a red circle. There is also a "Cancel" button next to it.

Your app is being created.

Resources

Documentation [for Node.js in App Engine](#).
Visit [Github](#) [for code samples in standard Node.js](#)

Deploy with Google Cloud SDK

[Download the Cloud SDK](#)

Initialize your SDK
`$ gcloud init`

Deploy to App Engine
`$ gcloud app deploy`

I'LL DO THIS LATER

https://cloud.google.com/sdk/?hl=en_US

Welcome to App Engine

Build scalable apps in any language on Google's infrastructure

Your App Engine application has been created

Let us help you deploy to your application by pointing you at the relevant resources based on your programming language.

[Get started](#)

Hello World
New to App Engine? Start with a simple "Hello World" app to learn the essentials.
Time: 10 minutes

[START TUTORIAL](#)

Deploy via command line
With the Google Cloud SDK, you can use the CLI to easily create and deploy your app:

`$ gcloud app deploy`

[DOWNLOAD THE SDK](#)

Project info

- Project name: My First Project
- Project ID: aqueous-choir-259416
- Project number: 601965896917

[ADD PEOPLE TO THIS PROJECT](#)

[Go to project settings](#)

RPC APIs

Requests (requests/sec)
1.0
0.8
0.6
0.4
0.2
0

10 AM 10:15 10:30 10:45

[Go to APIs overview](#)

Google Cloud Platform status

All services normal

[Go to Cloud status dashboard](#)

Error Reporting

No sign of any errors. Have you set up Error Reporting?

[Learn how to set up Error Reporting](#)

News

Leave manual cluster resizing behind with Cloud Dataproc's

The screenshot shows the Google Cloud Platform dashboard. On the left, there's a sidebar with categories like Compute Engine, Kubernetes Engine, Cloud Functions, Cloud Run, Storage (Bigtable, Datastore), and Firewall. The main area is titled 'Deploying a React App to Google Cloud Platform using Google App Engine'. It has sections for 'Trace' (No trace data from the past 7 days), 'Getting Started' (Explore and enable APIs, Deploy a prebuilt solution), and 'Documentation' (Learn about App Engine). There are also news items on the right: 'autoscaling' (3 days ago), 'Introducing Batch on GKE—modernizing HPC with Kubernetes in the cloud' (3 days ago), and 'Quick Map Layer Visualizations with GeoJSON and GeoRSS' (3 days ago). A 'Read all news' link is also present.

If you followed the steps successfully, you should be able to see your Google App Engine dashboard like the last picture above. That was the last thing we had to do with the App Engine web console. Now, our focus will be on using the gcloud CLI. Verify that you have it by executing:

```
gcloud --version
```

If you are having trouble installing it, [here is your official guide](#).

• • •

Now navigate to your React app folder. We need to create a new app.yaml file in the root of our project folder that the gcloud CLI will use to deploy our app to the App Engine.

After you create the file, add this content to it ([official source](#)):

```
runtime: nodejs
env: flex

# This sample incurs costs to run on the App Engine flexible
environment.
# The settings below are to reduce costs during testing and are
not appropriate
# for production use. For more information, see:
#
https://cloud.google.com/appengine/docs/flexible/nodejs/configuring-your-app-with-app-yaml
manual_scaling:
  instances: 1
resources:
  cpu: 1
memory_gb: 0.5
disk_size_gb: 10
```

Make sure to save the file, and now we are finally ready to use the CLI:

```
gcloud init
```

```
[redacted]:react-appengine [redacted]$ gcloud init
Welcome! This command will take you through the configuration of gcloud.

Settings from your current configuration [default] are:
compute:
[redacted]
[redacted]
[redacted]
[redacted]
[redacted]

Pick configuration to use:
[1] Re-initialize this configuration [default] with new settings
[2] Create a new configuration
Please enter your numeric choice: 2 } }
```

Enter configuration name. Names start with a lower case letter and contain only lower case letters a-z, digits 0-9, and hyphens '-': parrot-config
Your current configuration has been set to: [parrot-config]

You can skip diagnostics next time by using the following flag:
gcloud init --skip-diagnostics

Network diagnostic detects and fixes local network connection issues.
Checking network connection...done.
Reachability Check passed.
Network diagnostic passed (1/1 checks passed).

Choose the account you would like to use to perform operations for this configuration:
[1]
[2] Log in with a new account
Please enter your numeric choice: 2 }

Your browser has been opened to visit:

```
[redacted]
```

You are logged in as: [redacted]. }

Pick cloud project to use:

```
[1] aqueous-choir-259416
[2] clean-breaker-259416
[3] focus-pulling-259416
[4] Create a new project
Please enter numeric choice or text value (must exactly match list
item): 1

Your current project has been set to: [aqueous-choir-259416].
```

Follow the steps to add your account, region, and make sure to pick the project you just created.

Once that has been initialized successfully, we can run the final and ultimate deploy command:

```
gcloud app deploy
```

```
(base) 192.168.1.11:react-appengine [cn156912]$ gcloud app deploy
Services to deploy:

descriptor:      [/Users/cn156912/Documents/react-appengine/app.yaml]
source:          [/Users/cn156912/Documents/react-appengine]
target project:  [aqueous-choir-259416]
target service:   [default]
target version:  [20191118t150603]
target url:      [https://aqueous-choir-259416.appspot.com]

Do you want to continue (Y/n)? y
```





After a few minutes, you should see a link in “Deployed service [default] to”:

```
Finished Step #1
PUSH
DONE

-----
Updating service [default] (this may take several minutes)...done.
Setting traffic split for service [default]...done.
Stopping version [aqueous-choir-259416/default/20191118t111518].
Sent request to stop version [aqueous-choir-259416/default/20191118t111518]. This operation ma
y take some time to complete. If you would like to verify that it succeeded, run:
$ gcloud app versions describe -s default 20191118t111518
until it shows that the version has stopped.
Deployed service [default] to [https://aqueous-choir-259416.appspot.com]

You can stream logs from the command line by running:
$ gcloud app logs tail -s default
.

To view your application in the web browser run:
$ gcloud app browse
```

Visit it in your browser to find your deployed React App. Here is [mine](#).

Congrats Champ! You did it! 🎉🎉🎉

[Here is a link to the git repo](#) that contains the React app and the YAML file that was used for this article. Thank you for reading! ❤️📖

React

Google App Engine

Web Development

DevOps

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