

# React App with NGINX

## Objective

We will deploy a React App using Ubuntu(AWS EC2) and serve it with Nginx from the respective VM's public IP.

## What You'll Need

- A running **Ubuntu VM** (cloud or local)
- Basic knowledge of Linux commands
- Internet access from the VM

## Install Software & Application Modification

### 1. Install Node.js & npm

1. `sudo apt update`
2. `sudo apt install -y nodejs npm`
3. `node -v && npm -v`

### 2. Install and Start Nginx

1. `sudo apt install -y nginx`
2. `sudo systemctl start nginx`
3. `sudo systemctl enable nginx`

### 3. Clone the React App Repo

1. `git clone https://github.com/pravinmishraaws/my-react-app.git`
2. `cd my-react-app`

### 4. Open the App.js file

a. Navigate to your React app's source folder:

1. `cd my-react-app/src`

b. Open the App.js file in a text editor:

1. `nano App.js`

*(or use vi/vim if you prefer)*

c. **Modify the content**

`<h2>Deployed by: <strong>Your Full Name</strong></h2>`

`<p>Date: <strong>DD/MM/YYYY</strong></p>`

**Update your details like:** Your Full Name & Date

### **Build Application for Production:**

#### **1. Install Dependencies & Build App**

1. `npm install`

2. `npm run build`

#### **2. Serve React App via Nginx**

1. `sudo rm -rf /var/www/html/*`

2. `sudo cp -r build/* /var/www/html/`

3. `sudo chown -R www-data:www-data /var/www/html`

4. `sudo chmod -R 755 /var/www/html`

#### **3. Configure Nginx**

Replace the default config:

```
echo 'server {  
    listen 80;  
    server_name _;  
    root /var/www/html;  
    index index.html;
```

```
location / {  
    try_files $uri /index.html;  
}
```

```
error_page 404 /index.html;  
}' | sudo tee /etc/nginx/sites-available/default > /dev/null
```

```
sudo systemctl restart nginx
```

#### 4. Test the App

Get your public IP:

1. curl ifconfig.me

Access it in your browser:

http://<your-public-ip>

Public URL of app: <http://13.221.126.95/>

The screenshot displays the AWS Management Console interface. On the left, the navigation menu shows 'EC2' selected, with sub-options like 'Dashboard', 'Global View', 'Events', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMI Catalog', 'Elastic Block Store', 'Volumes', 'Snapshots', 'Lifecycle Manager', and 'Network & Security'. The main content area is titled 'Instances (1/1)' and shows a table with one instance: 'ReactApp\_Ubuntu' (ID: i-027fdf4ef594d2f8e), which is in a 'Running' state. Below the table, the 'Details' tab for this instance is active. It shows various attributes: Instance ID, IPv6 address, Hostname type, Answer private resource DNS name, Auto-assigned IP address, Public IPv4 address (13.221.126.95), Private IP DNS name, Instance state (Running), Private IP type (t2.micro), VPC ID, Private IPv4 addresses, Public DNS, Elastic IP addresses, and an AWS Compute Optimizer finding. The 'Public IPv4 address' is circled in red.

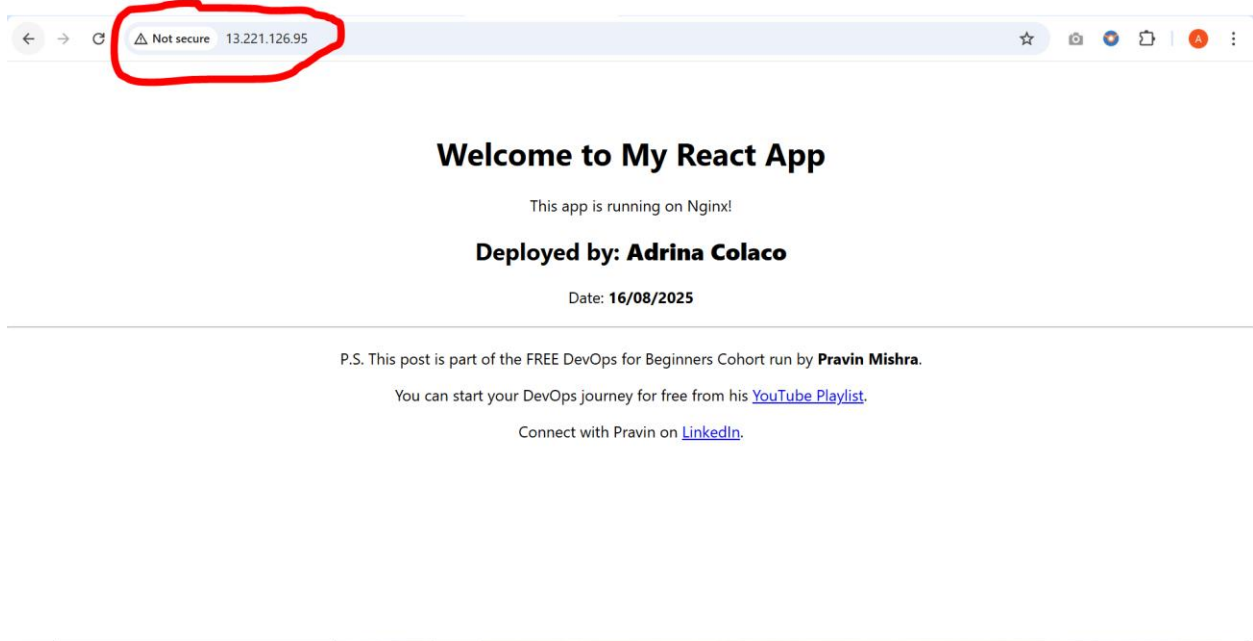
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availabi...	Public IPv4 DNS	Public IPv4 ...
ReactApp_Ubu...	i-027fdf4ef594d2f8e	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-13-221-126-...	13.221.126.95

**i-027fdf4ef594d2f8e (ReactApp\_Ubuntu)**

**Instance summary**

- Instance ID: i-027fdf4ef594d2f8e
- IPv6 address: -
- Hostname type: IP name: ip-172-31-18-14.ec2.internal
- Answer private resource DNS name: IPv4 (A)
- Auto-assigned IP address: 13.221.126.95 [Public IP]
- Public IPv4 address: 13.221.126.95 | open address
- Instance state: Running
- Private IP DNS name (IPv4 only): ip-172-31-18-14.ec2.internal
- Instance type: t2.micro
- VPC ID: vpc-00d70ddc6828a5629 (DoNotDelete)
- Private IPv4 addresses: 172.31.18.14
- Public DNS: ec2-13-221-126-95.compute-1.amazonaws.com | open address
- Elastic IP addresses: -
- AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations.

## Screenshot of the browser view



## Terminal output of npm run build or curl <public-ip>

```
ubuntu@ip-172-31-18-14:~/my-react-app/src$ npm run build

> my-react-app@0.1.0 build
> react-scripts build

Creating an optimized production build...
Browserslist: browsers data (caniuse-lite) is 6 months old. Please run:
  npx update-browserslist-db@latest
  Why you should do it regularly: https://github.com/browserslist/update-db#readme
Compiled successfully.

File sizes after gzip:

  59.21 kB  build/static/js/main.7bb3a7a5.js
  1.78 kB   build/static/js/453.ad6eb26e.chunk.js
  264 B     build/static/css/main.e6c13ad2.css

The project was built assuming it is hosted at /.
You can control this with the homepage field in your package.json.

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

  npm install -g serve
  serve -s build

Find out more about deployment here:

  https://cra.link/deployment

ubuntu@ip-172-31-18-14:~/my-react-app/src$ sudo rm -rf /var/www/html/*
ubuntu@ip-172-31-18-14:~/my-react-app/src$ sudo cp -r build/* /var/www/html/
cp: cannot stat 'build/*': No such file or directory
ubuntu@ip-172-31-18-14:~/my-react-app/src$ ls
App.css  App.js  App.test.js  index.css  index.js  logo.svg  reportWebVitals.js  setupTests.js  tests
ubuntu@ip-172-31-18-14:~/my-react-app/src$ cd ..
ubuntu@ip-172-31-18-14:~/my-react-app$ ls
README.md  build  node_modules  package-lock.json  package.json  public  src
ubuntu@ip-172-31-18-14:~/my-react-app$ sudo cp -r build/* /var/www/html/
ubuntu@ip-172-31-18-14:~/my-react-app$ sudo chown -R www-data:www-data /var/www/html/
ubuntu@ip-172-31-18-14:~/my-react-app$ sudo chmod -R 755 /var/www/html/
ubuntu@ip-172-31-18-14:~/my-react-app$ echo 'server {
    listen 80;
    server_name ;
    root /var/www/html;
    index index.html;

    location / {
        try_files $uri /index.html;
    }

    error_page 404 /index.html;
}' | sudo tee /etc/nginx/sites-available/default > /dev/null

sudo systemctl restart nginx
ubuntu@ip-172-31-18-14:~/my-react-app$ curl ifconfig.me
13.221.126.95
ubuntu@ip-172-31-18-14:~/my-react-app$ curl 13.221.126.95
<!doctype html><html lang="en"><head><meta charset="utf-8"/><link rel="icon" href="/favicon.ico"/><meta name="viewport" content="width=device-width,initial-scale=1"/><meta name="theme-color" content="#000000"/><meta name="description" content="web site created using create-react-app"/><link rel="apple-touch-icon" href="/logo192.png"/><link rel="manifest" href="/manifest.json"/><title>React App</title><script defer="defer" src="/static/js/main.7bb3a7a5.js"></script><link href="/static/css/main.e6c13ad2.css" rel="stylesheet"></head><body><noscript>You need to enable JavaScript to run this app.</noscript><div id="root"></div></body></html>
ubuntu@ip-172-31-18-14:~/my-react-app$ curl ifconfig.me
13.221.126.95
ubuntu@ip-172-31-18-14:~/my-react-app$
```

i-027fd4ef594d2f8e (ReactApp\_Ubuntu)

PublicIPs: 13.221.126.95 PrivateIPs: 172.31.18.14