

Install Software & Application Modification:

1. Install Node.js & npm

1. sudo apt update

```
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo apt update
[sudo] password for dorbsyfx-sys-admin_svr:
Get:1 http://archive.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Hit:6 http://archive.ubuntu.com/ubuntu noble InRelease
Get:7 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-proposed InRelease [265 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-security/main amd64 Packages [1,083 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]
```

2. sudo apt install -y nodejs npm

```
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo apt install -y nodejs npm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nodejs is already the newest version (18.19.1+dfsg-6ubuntu5).
npm is already the newest version (9.2.0~ds1-2).
The following packages were automatically installed and are no longer required:
  bridge-utils gcc-12-base irqbalance libappstream4 libblockdev-crypto2 libblockdev-fs2 libblockdev-loop2
  libblockdev-part-err2 libblockdev-part2 libblockdev-swap2 libblockdev-utils2 libblockdev2 libdns-export1110
  libisc-export1105 libldap-2.5-0 libmpdec3 libparted-fs-resize0 libpcre3 libperl5.34 libpython3.10-minimal
  libpython3.10-stdlib libunistring2 perl-modules-5.34 python3-compose python3-dockerpty python3-docopt
  python3-dotenv python3-lib2to3 python3-texttable python3.10 python3.10-minimal ubuntu-fan
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 41 not upgraded.
```

3. node -v && npm -v

```
dorbsyfx-sys-admin_svr@sys-adminserver:/$ node -v && npm -v
v18.19.1
9.2.0
```

2. Install and Start Nginx

1. sudo apt install -y nginx

```
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo apt install -y nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  bridge-utils gcc-12-base irqbalance libappstream4 libblockdev-crypto2 libblockdev-fs2 libblockdev-loop2
  libblockdev-part-err2 libblockdev-part2 libblockdev-swap2 libblockdev-utils2 libblockdev2 libdns-export110
  libisc-export1105 libldap-2.5-0 libmpdec3 libparted-fs-resize0 libpcre3 libperl5.34 libpython3.10-minimal
  libpython3.10-stdlib libunistring2 perl-modules-5.34 python3-compose python3-dockerpty python3-docopt
  python3-dotenv python3-lib2to3 python3-texttable python3.10 python3.10-minimal ubuntu-fan
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc
The following packages will be upgraded:
  nginx nginx-common
2 upgraded, 0 newly installed, 0 to remove and 39 not upgraded.
Need to get 564 kB of archives.
After this operation, 0 B of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-security/main amd64 nginx amd64 1.24.0-2ubuntu7.5 [520 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-security/main amd64 nginx-common all 1.24.0-2ubuntu7.5 [43.4 kB]
Fetched 564 kB in 1s (706 kB/s)
Preconfiguring packages ...
```

2. sudo systemctl start nginx

```
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo systemctl start nginx
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx
```

3. sudo systemctl enable nginx

```
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo systemctl start nginx
dorbsyfx-sys-admin_svr@sys-adminserver:/$ sudo systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx
```

3. Clone the React App Repo

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

```
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects$ git clone https://github.com/pravinmishraaws/my-react-app.git
Cloning into 'my-react-app'...
remote: Enumerating objects: 69, done.
remote: Counting objects: 100% (69/69), done.
remote: Compressing objects: 100% (66/66), done.
remote: Total 69 (delta 28), reused 23 (delta 2), pack-reused 0 (from 0)
Receiving objects: 100% (69/69), 188.94 KiB | 1.78 MiB/s, done.
Resolving deltas: 100% (28/28), done.
```

2. cd my-react-app

4. Open the App.js file

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

1. cd my-react-app/src

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

1. nano [App.js](#)

```
GNU nano 7.2 App.js *
import React from "react";

function App() {
  return (
    <div style={{ textAlign: "center", paddingTop: "50px" }}>
      <h1>Welcome to My React App</h1>
      <p>This app is running on Nginx!</p>

      <h2>Deployed by: <strong>Derek Owusu Bekoe</strong></h2>
      <p>Date: <strong>27/08/2025</strong></p>

      <hr style={{ margin: "20px 0" }} />

      <p>
        P.S. This post is part of the FREE DevOps for Beginners Cohort run by
        <strong> Pravin Mishra</strong>.
      </p>
      <p>
        You can start your DevOps journey for free from his{" "}
        <a
          href="https://www.youtube.com/playlist?list=PLV0dqXbCs7bX88JeUZmK4fKTq2hJ5VS89"
          target="_blank"
          rel="noopener noreferrer"
        >
          YouTube Playlist
        </a>.
      </p>
      <p>
        Connect with Pravin on{" "}
        <a
          href="https://www.linkedin.com/in/pravin-mishra-aws-trainer/"
          target="_blank"
          rel="noopener noreferrer"
        >
          LinkedIn
        </a>.
      </p>
    </div>
  );
}

export default App;
```

3. (or use `vi/vim` if you prefer)
4. **Modify the content**

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

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

Update your details like: Your Full Name & Date

Build Application for Production:

1. **Install Dependencies & Build App**
 1. `npm install`

```

dorbsyfx-sys-admin_srvsys-adminserver:~/devops-engineer/projects/my-react-app$ npm install
npm WARN deprecated @babel/plugin-proposal-numeric-separator@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-numeric-separator instead.
npm WARN deprecated @babel/plugin-proposal-class-properties@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-class-properties instead.
npm WARN deprecated @babel/plugin-proposal-private-methods@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-private-methods instead.
npm WARN deprecated @babel/plugin-proposal-optional-chaining@7.21.0: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-optional-chaining instead.
npm WARN deprecated rimraf@3.0.2: Rimraf versions prior to v4 are no longer supported
npm WARN deprecated stable@0.1.8: Modern JS already guarantees Array#sort() is a stable sort, so this library is deprecated. See the compatibility table on MDN: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/sort#browser_compatibility
npm WARN deprecated @humanwhocodes/config-array@0.13.0: Use @eslint/config-array instead
npm WARN deprecated @babel/plugin-proposal-nullish-coalescing-operator@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-nullish-coalescing-operator instead.
npm WARN deprecated inflight@1.0.6: This module is not supported, and leaks memory. Do not use it. Check out lru-cache if you want a good and tested way to coalesce async requests by a key value, which is much more comprehensive and powerful.
npm WARN deprecated abab@2.0.6: Use your platform's native atob() and btoa() methods instead
npm WARN deprecated @babel/plugin-proposal-private-property-in-object@7.21.11: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-private-property-in-object instead.
npm WARN deprecated rollup-plugin-terser@7.0.2: This package has been deprecated and is no longer maintained. Please use @rollup/plugin-terser
npm WARN deprecated q@1.5.1: You or someone you depend on is using Q, the JavaScript Promise library that gave JavaScript developers strong feelings about promises. They can almost certainly migrate to the native JavaScript promise now. Thank you literally everyone for joining me in this bet against the odds. Be excellent to each other.
npm WARN deprecated (For a CapTP with native promises, see @endo/eventual-send and @endo/captp)
npm WARN deprecated @humanwhocodes/object-schema@2.0.3: Use @eslint/object-schema instead
npm WARN deprecated glob@7.2.3: Glob versions prior to v9 are no longer supported
npm WARN deprecated source-map-codec@1.4.8: Please use @jridgewell/source-map-codec instead
npm WARN deprecated domexception@2.0.1: Use your platform's native DOMException instead
npm WARN deprecated w3c-hr-time@1.0.2: Use your platform's native performance.now() and performance.timeOrigin.
npm WARN deprecated workbox-cacheable-response@6.6.0: workbox-background-sync@6.6.0
npm WARN deprecated workbox-google-analytics@6.6.0: It is not compatible with newer versions of GA starting with v4, as long as you are using GAv3 it should be ok, but the package is not longer being maintained
npm WARN deprecated svgo@1.3.2: This SVGO version is no longer supported. Upgrade to v2.x.x.
npm WARN deprecated eslint@8.57.1: This version is no longer supported. Please see https://eslint.org/version-support for other options.

added 1342 packages, and audited 1343 packages in 2m

```

2. npm run build

```

dorbsyfx-sys-admin_srvsys-adminserver:~/devops-engineer/projects/my-react-app$ 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.3337349e.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

```

2. Serve React App via Nginx

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

```
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ sudo rm -rf /var/www/html/*
[sudo] password for dorbsyfx-sys-admin_svr:
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ ls
build node_modules package.json package-lock.json public README.md src
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ 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:

1. `echo 'server {`
2. `listen 80;`
3. `server_name _;`
4. `root /var/www/html;`
5. `index index.html;`
6.
7. `location / {`
8. `try_files $uri /index.html;`
9. `}`
10.
11. `error_page 404 /index.html;`
12. `}' | sudo tee /etc/nginx/sites-available/default > /dev/null`

```
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ sudo chown -R www-data:www-data /var/www/html
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ sudo chmod -R 755 /var/www/html
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/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
```

13. `sudo systemctl restart nginx`

4. Test the App

Get your public IP:

1. `curl ifconfig.me`

```
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ sudo systemctl restart nginx
dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ curl ifconfig.me
107.146.34.157dorbsyfx-sys-admin_svr@sys-adminserver:~/devops-engineer/projects/my-react-app$ |
```

5. Access it in your browser:

`http://<your-public-ip>`

6. Based on the network configuration of my Ubuntu guest server, I run `ip a` to know the ip address tied to the HostOnly adapter. The

ip address was the public ip to access the web interface of the react app.