

Here's a **step-by-step guide** to build an **iOS .ipa file** from an **Angular + Capacitor** project. This assumes you already have an Angular app integrated with Capacitor.

1. Prerequisites

Make sure you have:

- **macOS** with latest **Xcode** installed.
- **Apple Developer Account** (paid) for signing and distributing.
- **Node.js** and **npm** installed.
- **Capacitor CLI** installed globally:

```
npm install -g @capacitor/cli
```

2. Build Angular App

First, build your Angular app for production:

```
ng build --configuration production
```

This outputs files into `dist/<your-app-name>`.

3. Sync with Capacitor

Copy the Angular build into the iOS project:

```
npx cap sync ios
```

This updates the native iOS project with your latest web build.

4. Open in Xcode

```
npx cap open ios
```

This opens the iOS project in Xcode.

5. Configure in Xcode

Inside Xcode:

- Select your **project** in the left sidebar.
- Go to **Signing & Capabilities**.
- Choose your **Team** (Apple Developer account).
- Set a **unique Bundle Identifier** (e.g., com.example.myapp).
- Select the **target device** (iPhone, iPad, or Universal).

6. Build .ipa

You have two main options:

Option A – Archive for App Store / TestFlight

- In Xcode, select **Any iOS Device (arm64)** as the target.
- Go to **Product** → **Archive**.
- Once the archive is ready, click **Distribute App**.
- Choose **App Store Connect** or **Ad Hoc**.
- Xcode will generate and export the `.ipa`.

Option B – Export `.ipa` Locally

- In Xcode, go to **Product** → **Archive**.
- Select **Distribute App** → **Development / Ad Hoc**.
- Save the `.ipa` file locally for manual installation.

7. Install `.ipa` on Device (Optional)

You can install the `.ipa` using:

```
ios-deploy --bundle MyApp.ipa
```

Or drag-and-drop into **Apple Configurator 2**.

✔ Tips:

- Always run `npx cap sync ios` after rebuilding Angular.
- If you change native code or plugins, re-run `npx cap update ios`.
- For faster testing, use **`npx cap run ios`** to launch directly on a simulator or device.

If you want, I can give you a **ready-to-use shell script** that automates the Angular build → Capacitor sync → Xcode archive → .ipa export process so you can build with one command.

Do you want me to prepare that automation script?