

Development and Execution Tools for PWAs

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Tools

- Visual Studio Code: A highly configurable and extensible source code editor that is popular among web developers.
- Chrome DevTools: Integrated tool in the Google Chrome browser that facilitates development, debugging, and profiling of web applications.
- Lighthouse: An open-source automated tool for improving the quality of PWAs. It can perform audits for performance, accessibility, best practices, and SEO.
- Webpack: A module bundler that helps structure and optimize application code. It is commonly used in PWA projects for creating efficient bundles.

Installation Requirements

- Security: A secure connection (HTTPS) for your site ensures that all traffic is as secure as a native app. A secure endpoint also allows the service worker to take secure actions on behalf of your application.
- Standard Manifest: The site must be controlled by a W3C manifest that defines the experience and behavior of your PWA. This includes everything from images to language to the home page of your web application.
- Independence: The progressive web app must have a Network-Independent mechanism (e.g., through a service worker) to help manage traffic when the network is not available or unreliable. The application should be able to function independently of the network.
- Responsiveness: The site should be responsive on tablets and mobile devices.
- Cross-Browser: The site should work on various browsers (e.g., Chrome, Edge, Firefox, and Safari).
- Deep Linking: Each page of the site should have a unique URL (individual pages can be deep-linked via URLs, e.g., for sharing on social media).