## Developer Tool Prerequisites

\* [go](https://golang.org/doc/install) - The Go programming language

\* [dep](https://golang.github.io/dep/docs/installation.html) - Go dependency manager

\* [nvm](https://github.com/creationix/nvm#installation) - Node Version Manager (for installing NodeJS and NPM)

## Performing a Fresh Checkout

The following steps guide you through a fresh checkout

```

# Create a workspace

cd ~/Projects/grpc-web # or wherever you want your checkout to live

export GOPATH=$(pwd)

# Checkout project sources into your new go workspace

go get -u github.com/improbable-eng/grpc-web/go

cd $GOPATH/src/github.com/improbable-eng/grpc-web

# Install go dependencies

dep ensure

# Install NodeJS dependencies

nvm use

npm install

```

Note you will also need to [install prototool](https://github.com/uber/prototool/blob/dev/docs/install.md) and add it to your `PATH` environment variable if you wish to re-generate the integration test proto files.

## Testing Prerequisites

Before you run the tests for the first time, please follow these steps:

### Installing the Local Certificate

In order to run the Karma (Integration) tests, you will need to add the certificate found in `misc/localhostCA.pem` to your system's list of trusted certificates. This will vary from operating system to operating system.

### macOS

1. Open Keychain Access

2. Select 'System' from the list of Keychains

3. From the `File` menu, select `Import Items`

4. Select `misc/localhost.crt`

5. Double click on the new `GRPC Web example dev server` certificate

6. Expand the `Trust' section

7. Change the `When using this certificate` option to `Always Trust`

8. Close the certificate details pop-up.

Repeat the above process for `misc/localhostCA.pem`.

### Setting the required hostnames

Add the following entries to your system's `hosts` file:

```

# grpc-web

127.0.0.1 testhost

127.0.0.1 corshost

```

## Running the Tests

These steps assume you have performed all the necessary testing prerequisites. Also note that running all the tests will require you to open a web-browser on your machine.

To start the test suite, run:

```

cd src/github.com/improbable-eng/grpc-web

npm test

```

At some point during the test run, execution will pause and the following line will be printed:

```

INFO [karma]: Karma v3.0.0 server started at https://0.0.0.0:9876/

```

This is your prompt to open a web browser on https://localhost:9876 at which point the tests will continue to run.

## Creating a Release

1. From a fresh checkout of master, create a release branch, ie: `feature/prepare-x.y.z-release`

2. Update `CHANGELOG.md` by comparing commits to master since the last Github Release

3. Raise a pull request for your changes, have it reviewed and landed into master.

4. Switch your local checkout back to the master branch, pull your merged changes and run `./publish-release.sh`.

5. Create the ARM binaries and attach them to the Github release.