Mobile Setup

There are many options for using WebDriver to test on mobile browsers. Protractor does not yet officially support or run its own tests against a particular configuration, but the following are some notes on various setup options.

Setting Up Protractor with Appium - Android/Chrome

Setup

Use `webdriver-manager` to install `appium` and the Android SDK. See details on the WebDriver Manager page.

Running Tests

- Ensure app is running if testing local app (Skip if testing public website):

```
> npm start # or `./scripts/web-server.js`
Starting express web server in /workspace/protractor/testapp on port 8000
```

- Start appium and the Android Emulators (details on the WebDriver Manager page).

```
> webdriver-manager start --android
```

- Configure protractor:

Config File:

```
exports.config = {
  seleniumAddress: 'http://localhost:4723/wd/hub',

  specs: ['basic/*_spec.js'],

  // Reference: https://github.com/appium/sample-code/blob/master/sample-code/examples/node/helpers/caps.js
  capabilities: {
    browserName: 'chrome',
    platformName: 'Android',
    platformVersion: '7.0',
    deviceName: 'Android Emulator',
  },

  baseUrl: 'http://10.0.2.2:8000'
};
```

Note the following:

- baseUrl is 10.0.2.2 instead of localhost because it is used to access the localhost of the host machine in the android emulator
- selenium address is using port 4723

Setting Up Protractor with Appium - iOS/Safari

Setup

Use `webdriver-manager` to install `appium` and the Android SDK. See details on the WebDriver Manager page.

Running Tests

- Ensure app is running if testing local app (Skip if testing public website):

```
> npm start # or `./scripts/web-server.js`
Starting express web server in /workspace/protractor/testapp on port 8000
```

- Start Appium:

```
> webdriver-manager start
```

Note: Appium listens to port 4723 instead of 4444.

- Configure protractor:

iPhone:

```
exports.config = {
  seleniumAddress: 'http://localhost:4723/wd/hub',

  specs: [
    'basic/*_spec.js'
  ],

  // Reference: https://github.com/appium/sample-code/blob/master/sample-code/examples/node/helpers/caps.js
  capabilities: {
    browserName: 'safari',
    platformName: 'iOS',
    platformVersion: '7.1',
    deviceName: 'iPhone Simulator',
  },

  baseUrl: 'http://localhost:8000'
};
```

iPad:

```
exports.config = {
  seleniumAddress: 'http://localhost:4723/wd/hub',

  specs: [
    'basic/*_spec.js'
  ],

  // Reference: https://github.com/appium/sample-code/blob/master/sample-code/examples/node/helpers/caps.js
  capabilities: {
    browserName: 'safari',
    platformName: 'iOS',
    platformVersion: '7.1',
    deviceName: 'IPad Simulator',
  },

  baseUrl: 'http://localhost:8000'
};
```

Note the following:

- note capabilities
- baseUrl is localhost (not 10.0.2.2)
- selenium address is using port 4723

Setting Up Protractor with Selendroid

Setup

- Install Java SDK (>1.6) and configure JAVA_HOME (Important: make sure it's not pointing to JRE).
- Follow http://spring.io/guides/gs/android/ to install and set up Android developer environment. Do not set up Android Virtual Device as instructed here.
- From commandline, 'android avd' and then follow Selendroid's recommendation (http://selendroid.io/setup.html#androidDevices). Take note of the emulator accelerator. Here's an example:

```
> android list avd
Available Android Virtual Devices:
    Name: myAvd
  Device: Nexus 5 (Google)
    Path: /Users/hankduan/.android/avd/Hank.avd
  Target: Android 4.4.2 (API level 19)
 Tag/ABI: default/x86
    Skin: WVGA800
```

Running Tests

- Ensure app is running if testing local app (Skip if testing public website):

```
> npm start # or `./scripts/web-server.js`
Starting express web server in /workspace/protractor/testapp on port 8000
```

- Start emulator manually (at least the first time):

```
> emulator -avd myAvd
HAX is working and emulator runs in fast virt mode
```

Note: The last line that tells you the emulator accelerator is running.

- Start selendroid:

```
> java -jar selendroid-standalone-0.9.0-with-dependencies.jar
...
```

- Once selendroid is started, you should be able to go to "http://localhost:4444/wd/hub/status" and see your device there:

```
{"value":{"os":{"name":"Mac OS X","arch":"x86_64","version":"10.9.2"},"build":{"browserName":"selendroid","version":"
```

- Configure protractor:

```
exports.config = {
  seleniumAddress: 'http://localhost:4444/wd/hub',

  specs: [
    'basic/*_spec.js'
  ],

  capabilities: {
    'browserName': 'android'
  },

  baseUrl: 'http://10.0.2.2:8000'
};
```

Note the following:

- browserName is 'android'
- baseUrl is 10.0.2.2 instead of localhost because it is used to access the localhost of the host machine in the android emulator

Using `wd` and `wd-bridge`

As of version 5.1.0, Protractor uses `webdriver-js-extender` to provide all the mobile commands you should need (see the API page for details). However, if you prefer `wd`, you can access it via `wd-bridge`. First, install both `wd` and `wd-bridge` as `devDependencies`:

```
npm install --save-dev wd wd-bridge
```

Then, in your config file:

```
// configuring wd in onPrepare
// wdBridge helps to bridge wd driver with other selenium clients
// See https://github.com/sebv/wd-bridge/blob/master/README.md
onPrepare: function () {
  var wd = require('wd'),
    protractor = require('protractor'),
    wdBridge = require('wd-bridge')(protractor, wd);
  wdBridge.initFromProtractor(exports.config);
}
```