**Discussion 9.4**

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Chrome Devtools has a security tab that allows you to check the security of your websites connection. When opened, the pane on the left shows each individual connection. Green icons mean the connection is secure, any other color means that the connection is not secure. There will be different links in the pane, and they will be divided by origins, such as main, secure, and non-secure. When clicking on one of these links more information will be revealed. In the right pane you will be able to see the connections origin, protocol, and certificate with timestamps and the URL the domain. The security overview tab will clearly tell you if there is a secure HTTPS or if there is a non-HTTPS connection. It would be wise to start from there, then to go down the links and figure out what non-secure connections are making the page insecure.

The network tab has the ability to throttle your speeds. This is very useful for testing loads on different types of connections. Being able to see how your page performs on different devices, is key for developing for multiple platforms. Sometimes you may want to see how your mobile site will perform at their expect internet speeds. Throttling your network would be the best solution. You can even bring it to a very slow speed to test how your fonts load. The directions are very simple, once you have opened the network tab, the tab bar directly under the network tab bar has a drop-down option which will read online. Its functionality is not clear until you hover over this option and a textual indicator titled throttling will float under. There are some preset options such as fast 3G, slow 3G, and offline. You can also select the customize option to further specify the connection speed. This option should be used in conjunction with the ability to simulate mobile views with device mode. Device mode allows you to change the viewing resolution, which can be used to test responsive design. You can also see how your page reacts at different resolutions to your media query specifications. Pressing the device toolbar at the top left of the developer tools pane will make your pages resolution completely adjustable. You can drag the page to a certain resolution or manually enter the exact resolution at the top of the page. Using this at a throttled speed will allow developers to see how their page reacts to mobile users at different resolutions and speeds.

The performance tab allows you to test runtime performance. Google.com explains “Runtime performance is how your page performs when it is running, as opposed to loading” (Basques, n.d.). Basically, this is how the site is performing while everything is up and in motion. If you are familiar with the task manager in windows, and have used the performance tab, then this tool will look somewhat familiar to you. The difference being that this tool records performance and then outputs the performance in a certain timeframe. This is useful for checking the frames per a second in animation sequences, which should reach a comfortable 60 fps. The less color seen in the CPU chart the better, as color indicates that the CPU is being maxed out. All this information should help guide you to any bottlenecks.

# References

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