



Pineapple

UI Performance testing

Document

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Sponsor: Ali Yavari/Reza Soltanpoor

Number: 002

Author: Sadurshan Ganeshan

Commercial-in-Confidence

Changelog

Date	Version	Description	Author
25th May 2017	1.0	Created Document. Finished first draft to be sent to supervisor	Sadurshan Ganeshan
12th June 2017	1.1	Added Changelog and document information	Sadurshan Ganeshan

Tools

The tool used for benching marking was UI s Yslow provided by Yahoo. The tool is installed in the web browsers in the form of an extension making it easier to run tests on the respective pages of the application. It provides scores and reasons for its particular score results .

Main Factors affecting performance

HTTP Requests

Lower http requests result in pages loading faster on the client's computer. All the web pages of the application have been simplified to an extent so that loading times are short as possible.

Home | **Grade** | Components | Statistics | Rulesets YSlow(V2) | Edit

Grade C Overall performance score 72 RuleSet applied: YSlow(V2) URL: http://pineapple-stocks.ddns.net/stock/ANZ

ALL (23) FILTER BY: [CONTENT \(6\)](#) | [COOKIE \(2\)](#) | [CSS \(6\)](#) | [IMAGES \(2\)](#) | [JAVASCRIPT \(4\)](#) | [SERVER \(6\)](#) [Tweet](#)

Grade	Recommendation
E	Make fewer HTTP requests
F	Use a Content Delivery Network (CDN)
A	Avoid empty src or href
F	Add Expires headers
F	Compress components with gzip
A	Put CSS at top
E	Put JavaScript at bottom
A	Avoid CSS expressions
n/a	Make JavaScript and CSS external

Grade E on Make fewer HTTP requests

This page has 9 external Javascript scripts. Try combining them into one.
This page has 7 external stylesheets. Try combining them into one.

Decreasing the number of components on a page reduces the number of HTTP requests required to render the page, resulting in faster page loads. Some ways to reduce the number of components include: combine files, combine multiple scripts into one script, combine multiple CSS files into one style sheet, and use CSS Sprites and image maps.

[»Read More](#)

Score-E

Since the application requires certain scripts on its respective pages. This results in more isolated scripts. The score was heavily impacted by the use of inline css which is necessary as by the requirements.

External style sheets

The use of external style sheets allows the browser the cache

n/a Make JavaScript and CSS external	Grade n/a on Make JavaScript and CSS external
A Reduce DNS lookups	<p>Only consider this if your property is a common user home page.</p> <ul style="list-style-type: none"> There is a total of 2 inline css There is a total of 6 inline scripts <hr/> <p>Using external JavaScript and CSS files generally produces faster pages because the files are cached by the browser. JavaScript and CSS that are inlined in HTML documents get downloaded each time the HTML document is requested. This reduces the number of HTTP requests but increases the HTML document size. On the other hand, if the JavaScript and CSS are in external files cached by the browser, the HTML document size is reduced without increasing the number of HTTP requests.</p>
F Minify JavaScript and CSS	
A Avoid URL redirects	
A Remove duplicate JavaScript and CSS	
A Configure entity tags (ETags)	
A Make AJAX cacheable	
A Use GET for AJAX requests	
A Reduce the number of DOM elements	
C Avoid HTTP 404 (Not Found) error	
A Reduce cookie size	

Score-N/A

The application was built using the front-end framework bootstrap. Inline css was used to style particular pages. Each page had its own set of elements, thus making inline css suitable.

Avoiding redirects

No external redirects are present in the application.Since no external redirects are present this reduces loading times.This also keeps the user interested and within the application. Use of http status codes 301 and 302 were excluded in building the application

A Avoid URL redirects	Grade A on Avoid URL redirects
A Remove duplicate JavaScript and CSS	<p>URL redirects are made using HTTP status codes 301 and 302. They tell the browser to go to another location. Inserting a redirect between the user and the final HTML document delays everything on the page since nothing on the page can be rendered and no components can be downloaded until the HTML document arrives.</p> <p>»Read More</p>
A Configure entity tags (ETags)	
A Make AJAX cacheable	
A Use GET for AJAX requests	
A Reduce the number of DOM elements	
C Avoid HTTP 404 (Not Found) error	
A Reduce cookie size	

Score-A

The application scored an ideal A in the test clearly stating that

HTTP 404

C	Avoid HTTP 404 (Not Found) error	Grade C on Avoid HTTP 404 (Not Found) error
A	Reduce cookie size	There are 5 requests that are 404 Not Found
F	Use cookie-free domains	<ul style="list-style-type: none">• http://pineapple-stocks.ddns.net/stock/jj/js/three.min.js• http://pineapple-stocks.ddns.net/stock/jj/js/renderers/CanvasRenderer.js• http://pineapple-stocks.ddns.net/stock/jj/js/renderers/Projector.js• http://pineapple-stocks.ddns.net/stock/jj/js/controls/TrackballControls.js• http://pineapple-stocks.ddns.net/stock/jj/js/libs/stats.min.js
A	Avoid AlphaImageLoader filter	
A	Do not scale images in HTML	
A	Make favicon small and cacheable	

Score-C

The three js requests caused the score to drop down to c. The three js framework is used to provide an interactive background for the homepage.s

Responsiveness

The website is responsive. The pages scale well. The website can be opened with a mobile, charts,graphs scale with changes in width and height. Since the application was built using bootstrap. Bootstrap makes the application design more intuitive mobile ready..