



OCTOBER 20, 2022

# THE HAUKAUI RESTAURANT

## WEB ENHANCEMENT REPORT

LUDMILA WHITMORE

SN 5057553

AS3 BIT607 Web Development, Open Polytechnic

## Table of Contents

---

Executive Summary .....	2
The User Experience (static vs. dynamic content).....	2
Security.....	3
Web Hosting Options.....	3
Marketing Strategy .....	4
SSL Certificates .....	5
Content Delivery Network .....	5
Plugins .....	6
Conclusion/ Recommendations .....	6
References .....	6

## Executive Summary

---

The purpose of this report is to outline the steps Haukai restaurant needs to take to enhance the user experience when accessing the web application, the potential security threats to the application. The report will also provide some options as to web hosting options and a marketing strategy. Before the conclusion, the report will also introduce options for obtaining an SSL certificate for the application and suggestions of providers of Content Delivery Network to ensure optimisation and protection of the web application.

## The User Experience (static vs. dynamic content)

---

The user experience was one of the main focuses when designing the web application. As such the web application is simple, very easy to navigate through and it follows the expected layout so the visitor can focus on the content itself and not how to find it.

Navigation through the application is facilitated by the navigation bar which is located in the top centre of each page. On the home page, the visitor can see the interior of the restaurant, opening hours and two links to reservations and the full menu for the ease of use for a returning visitor. All content on the main page is static.

Second option in the navigation bar is “Menu”. This page also offers static content, listing the whole menu of the restaurant, accompanied some imagery of the restaurant’s most popular dishes. Drink list is not listed on the website but can be downloaded via the complete menu download link. This decision was made based on the type of customer visiting the restaurant. The restaurant is advertising authentic Māori cuisine where the type of cuisine is the main selling point of the restaurant and the drink list contains only a standard selection of beverages.

Next two pages the customer can navigate to are “Hours” and “Reservations”. Both pages have a function which is facilitated by a dynamic content. The opening hours page displays the days when the restaurant is open and the opening hours. The embedded Google Calendar is easy to update by the owners of the restaurant and visitors can fully enjoy the functions of the selection of Google tools when looking for a time slot suitable to fit into their Google Calendar. The Reservation system is then facilitated by the Google Forms, which collects all the necessary information for visitors to make booking at the restaurant.

“About Us” page is static only displaying image of the owners and a short description of their journey and the story of the restaurant.

Finally, the contact page is a mix of static and dynamic content, displaying the embedded Google Maps window and all other contact details of the restaurant. The Google Maps is a perfect addition to the application as the visitor can clearly see the location of the restaurant and when expanded, they can access all the features like ‘Directions’ can be used by the visitor to be shown the directions to the restaurant from anywhere.

## Security

---

The security of the web application also needs to be ensured as it now, after the expansion, contains personal and contact details of the staff of the restaurant. Possible issues arising looked at from the Parkerian hexad point of view:

**Confidentiality** – Customer's name and phone number could be accessed without authority – this could be done by a hacker or by an employee. This could affect the customers and the trust they have in the business potentially damaging the business's name. To prevent that, web application should be secure, protected by strong passwords, and any personal details should be protected by limiting access – digital and physical.

**Possession** – The customer's details are not stored on any external device. Main database is located in the main office computer. Only breach of possession attribute would be a burglary at the restaurant. As such proper locking mechanisms and extra security measures can be taken at the restaurant. Consequences of this breach would be same as a breach of confidentiality.

**Integrity** – Integrity of the customers information modified by a hacker, in case of the restaurant doesn't have any serious implications as the data is only used for marketing purposes. Again, secure network and strong passwords would help prevent this happening. Implications of the breach are same as Confidentiality as the hackers would access the original data which they can misuse.

**Authenticity** – Now when the restaurant attracts a large number of customers and bookings. A hacker could see an opportunity to create a copy of the website and direct all the traffic to his site where trusting customers enter their details. This unfortunately can't be prevented but obtaining similar domain names would alarm customer when they see obviously different name in the address bar. For breach of authenticity, it is important to act the moment the breach is discovered so no more customers give away their details.

**Availability** – In case of an attack on the website, causing the website to be temporarily unavailable can cause the business a few customers – depending on the time the site is under the attack. This can be prevented by using content delivery network so even if one server is attacked, the site can be accessed from the other servers.

**Utility** – If fake customers details are entered into the database, there is minimal disruption to the running of the restaurant. As the customer's data are only used for the marketing purposes, upon discovery of the fake data – the segment would be unusable. This can be prevented by securing the network and creating strong passwords.

## Web Hosting Options

---

To choose web hosting service. I have selected two New Zealand based providers as for a restaurant web application – unless of a worldwide presence – the visitors will be NZ based. This will ensure fast loading and easy support services without a need to consider time zones differences. All prices are in NZD.

	<b>Crazydomains.co.nz</b> Premium plan	<b>Webhostingnz.com</b> Basic plan
--	---	---------------------------------------

<b>Cost</b>	\$ 8.00/ monthly	\$ 8.95/ monthly
<b>Uptime</b>	99.9%	99.5%
<b>Customer Support</b>	24/7	24/7
<b>Features</b>	cPanel, 500 email accounts, DDoS protection, 24/7 site monitoring, file backup, email protection, 60-day money back, unlimited websites, Cloud network - 300% Faster speed, 5 stock images	cPanel, free website builder, 10 email accounts, configurable anti-spam, site statistics, 3 websites, free SSL certificates
<b>Space</b>	500GB	10GB
<b>Traffic Limits</b>	Unlimited	Unlimited
<b>Penalties for change</b>	None in the first 60 days	None in the first 30 days

Crazydomains.co.nz offer wide variety of services for different lengths of time and an affordable price which is a reasonable for the Haukai restaurant. Unfortunately, they do not offer SSL certificates within their packages which will be an extra cost in comparison with the Webhostingnz.com packages. In all other aspects, the Webhostingnz.com packages are inferior to the offers at Crazydomains.co.nz.

## Marketing Strategy

I believe The Haukai Restaurant would be best marketed on the tourist sites and local accommodation sites. As local population will be by now familiar with the restaurant and the menu, the web application advertising should target the visitors to the area. Domain names like [www.haukai.nz](http://www.haukai.nz) or [www.haukairestaurant.nz](http://www.haukairestaurant.nz) are both available on Crazydomains.co.nz for only \$26/ monthly. This will ensure easy guess for the customer when unsure about the address. Having a simple domain name also appears trustworthy to the visitors.

Two suitable keywords are **the Haukai restaurant** and **authentic Māori cuisine**. Also, Haukai, Kerikeri Haukai, Kerikeri restaurant would be suitable to add into the meta data of the website. The scores of the keyword explorer show low priority but considering the small-town environment and limited customer pool, overall results are reasonable.

The website then can be submitted to the search engines. For Google search engine the website can be submitted via this link: [https://developers.google.com/search/docs/crawling-indexing/ask-google-to-recrawl?visit\\_id=637517045165699883-3650216538&rd=1](https://developers.google.com/search/docs/crawling-indexing/ask-google-to-recrawl?visit_id=637517045165699883-3650216538&rd=1), while Bing search engine accepts new submissions by their webmaster tool IndexNow at the following link: <https://blogs.bing.com/webmaster/august-2022/IndexNow-adoption-gains-momentum>.

A couple of the many options for pay-per-click advertising are Google Ads and Google Display Network, both of them are easy to set up and they ensure the advertising will be displayed to the right audience at the right time. Google Display Network delivers affordable advertising for as low price as \$0.44 per click.

## SSL Certificates

SSL Certificates can be obtained as part of the web hosting service, as offered by Webhostingnz.com or from a separate provider. Prices are in USD.

	<b>Entrust Standard OV SSL</b>	<b>Thawte SSL Web Server</b>
<b>Purchase cost</b>	\$298.50 (1 year)	\$268.00 (1 year)
<b>Renewal cost</b>	Inaccessible without previous purchase	Inaccessible without previous purchase
<b>Features</b>	24x5 Support Unlimited Reissues Unlimited Server Licensing SHA-2/2048-Bit Keys 128-256-Bit Encryption SSL Server Test Compatible with 99.9% of Browsers	Thawte Trusted Site Seal, Free reissues, Access SSL/TLS Tools, 99% Browser Compatibility, Technical support, up to 256 bit encryption strength, 30 day money back guarantee

From the researched trusted companies, I believe it would be more affordable for the Haukai restaurant to sign up for a web hosting service which offer SSL Certificate included in their package. Until the web application offers online payment – for take aways for example, only standard SSL certificate is required.

## Content Delivery Network

	<b>Imperva App Protect Essentials</b>	<b>Cloudflare Pro</b>
<b>Purchase cost</b>	Not stated on the website	\$ 20/ monthly
<b>Renewal cost</b>	Not stated on the website	N/A
<b>Features</b>	WAF, API Security, Bot protection, Reporting and analytics, DDoS protection, DNS Protection, CDN, Application delivery, advanced reporting	DNS, Unmetered DDoS Protection, CDN, SSL Certificate, Managed ruleset, WAF, Image optimization, Accelerated mobile pages

In case of the Haukai Restaurant, the threat, and consequences for the business if the web application is unavailable are not too high and in this case, I believe it would be more beneficial to have the CDN function provided as part of some of the other packages instead of investing into a sophisticated CDN solution. For example, some web hosting providers offer CDN included in their web hosting package.

## Plugins

---

Two Visual Studio Extensions were installed while developing the web application. CSS Compressor and HTML Class Suggestions. **CSS Compressor** was used to eliminate unnecessary white space in the CSS code before the web application was submitted. Also, **Snyk Security – Code and Open Source Dependencies** was installed from the VS Code marketplace. The VS Code was connected with Snyk and the test run hasn't returned any security breaches.

## Conclusion/ Recommendations

---

To enhance the user experience when accessing The Haukai Restaurant web application, the application has been developed with a balanced mix of static and dynamic content. The development also focused on ensuring the security of the application and how to minimise the risk of security breaches.

Further the report outlined two options for web hosting providers for the application, the marketing strategy and other online services providing issue of SSL certificates and content delivery network.

## References

---

Crazy Domains.co.nz Retrieved 2022, October 20 from <https://www.crazydomains.co.nz/web-hosting/>

Webhostingnz.com Retrieved 2022, October 20 from <https://webhostingnz.com/services/web-hosting-overview/>

McNamara, J. (November 2021) *7 Best Web Hosting Services In NZ (New Zealand) Compared*. Retrieved 2022, October 20 from <https://www.topreviews.co.nz/best-web-hosting-nz/>

Entrust.com Retrieved 2022, October 20 from <https://www.entrust.com/>

Thawte.com Retrieved 2022, October 20 from <https://www.thawte.com/ssl/>

Cloudflare.com Retrieved 2022, October 20 from <https://www.cloudflare.com/plans/#price-matrix>

Imperva.com Retrieved 2022, October 20 from <https://www.imperva.com/products/plans/>

Digital Marketing Institute (July 2015) *The beginner's guide to Google's pay per click advertising*. Retrieved 2022, October 20 from <https://digitalmarketinginstitute.com/blog/beginners-guide-googles-pay-per-click-advertising>

Maake, R. (April 2022) *How much does Google Ads Cost in 2022?* Retrieved 2022, October 20 from <https://www.webfx.com/blog/marketing/much-cost-advertise-google-adwords/>