

## **ABSTRACT**

*Website architecture is an important consideration when creating a strong and reliable website. Jamstack provides a modern architectural approach to website development. Using the decoupling and pre-rendering features makes Jamstack very reliable, as the system and services are created separately and website content is generated on the server-side. The use of CDN brings the website closer to the user, increasing the speed of website access. This study aims to design the architectural of Jamstack by taking a case study of the Jogja Palace Website which currently still uses traditional architecture which is using a single server, where it will be difficult to scale when there is a spike in traffic and vulnerable to cyber attacks. The architecture will be divided into two parts: front-office and back-office. The front-office will use Netlify technology for website deployment and Github for code repositories and static files. The back-office will use Eleventy technology to generate static sites and Directus to manage website content. The separation of the two parts is intended to improve system security. A website testing simulation will be carried out with 3 scenarios of different country locations using an automation testing platform, namely GTMetric with 5 parameters, namely Performance Score, Load Time, Speed Index, Time to Interactive (TTIF) and Time to First Byte (TTFB). The results showed that from 3 different locations the best performance results were in Sydney, Australia with an average Performance Score of 94.6%, Load Time of 1,294 seconds, speed index of 1,032 seconds, Time to Interactive of 1,075 seconds and Time to First Byte. of 29.3 milliseconds.*

**Keywords:** *Jamstack, Jogja Palace, GTMetric, Static Site Generator, Content Delivery Network.*