# Performance Report

To measure the performance of the website we will be using website monitoring tools. With these tools we can continuously monitor downtime patterns and locate the culprits. They provide detailed information of your website’s performance including visitor counts, uptime, bounce rates, page loading times and other crucial information to guarantee the development of a successful website. Alongside these performance metrics these tools notify you about issues like device failure, bandwidth overload and problems with the web hosting provider. The website monitor tools work by monitoring the websites communication layer including the HTTP and TCP, internal and external DNS’s, internet service providers and content delivery networks.

**Performance Tools**

Five common monitoring tools that could be used to monitor the performance of the website include.

* Google PageSpeed Insight (PSI)

The PageSpeed insight tool provides real-time performance data for a website. The data is collected irrespective of the device the website is viewed on. It incorporates data from the Chrome User Experience Report (CrUX) to provide user experience metrics. The tool is easy to use and will categorizes a website as fast slow or average based on its speed score. It will also provide an optimization score evaluating how well a webpage follows performance best practices.

* GTmetrix

GTmetrix is a very popular tool for analysis site speed performance. The tool uses PageSpeed Insight and Yslow to generate performance scores and a detail report on the current state of a website. GTmetrix is easy to use and allows customization of the test configuration.

* WebPageTest (WPT)

WebPageTest is a free, open-source website performance testing tool. It captures useful metrics from the website and displays them in tables and charts allowing the user to spot performance delays and loopholes. The tool will work on any browser and on any device from any location. This tool has advanced features for running multiple tests, changing the connection speed and allows you to capture video of the test. Data collected from these tests include load times, time to first byte, speed index, DOM elements, and start render time, document complete time and fully loaded time.

* Dotcom-Monitor

Dotcom-Monitor gives the user insight into application performance and the state of the website. It lets you monitor servers, web applications, network availability and performance and website page load speeds. It allows you to choose the browser you use and also the location to test from.

* SolarWinds Pingdom

SolarWinds is a free website monitor tool designed to help analysis every element of the website. This tool will both point out issues in the website and offer solutions in how to fix the problem. It will also provide information on number of requests per domain, type of content, size analysis and size per domain.

**Recommendation**

Each of these tools provides key performance data on a website while also providing unique features designed to help monitor and improve a website. If I were developing a shopfront website for a business, where the performance for the site could mean the difference between a sale and a potential long-term client or the client going somewhere else I would be using the SolarWinds Pingdom tool. The plethora of data provided by this program coupled with both a free and a paid option that will provide the necessary data no matter the size of the client, makes this the right tool no matter what the needs of the clients may be. Also this is the only tool that both identifies issues but also provides solutions to those issues. Having said that for this basic movie search program I will do the performance testing using GTmetrix. As I only need basic performance data its ease of use trumps the detailed report provided by SolarWinds.

(Top 5 Website Monitoring Tools to Measure and Improve your Page Speed, n.d.)