

The Black Friday Monitoring Report

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The Black Friday Monitoring Report

1.0 Executive Summary

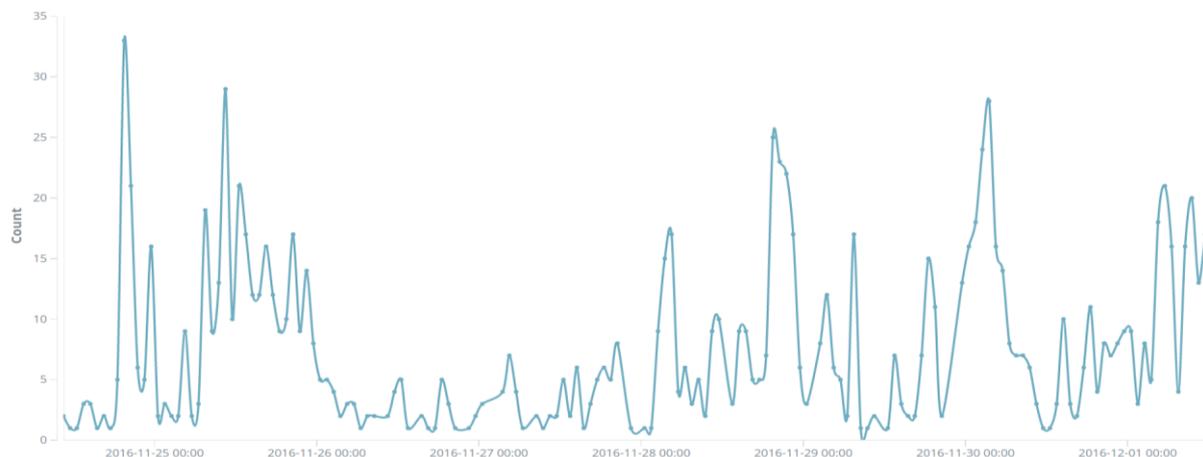
Each year Black Friday and Cyber Monday poses an ever increasing challenge to ecommerce retailers. Traffic volumes grow by around 6%-13% as online purchases move more towards mobile. By November 2016, mobile overtook desktop with 51.3% of loaded pages occurring on mobile devices. All of this is taking place in a world of increasing customer expectations, which places a significant amount of pressure on IT systems and website infrastructure.

30% of annual retail sales occur between Black Friday and Christmas. Due to the significance of this period and the pressures this puts on websites and their infrastructure, Intechnica undertook a performance monitoring project to look at 400 retailers over the Black Friday trading period. This was designed to be low impact and measure both up and down time and, the page characteristics of the top retail sites.

Our researchers used analytical techniques to obtain data on page statistics for Desktop and Mobile using Chrome, gathering page weight, load times, rendering times and third party interactions. The purpose of the report is to look at how the 400 retailers handled the additional load over Black Friday and to provide generic recommendations for next year.

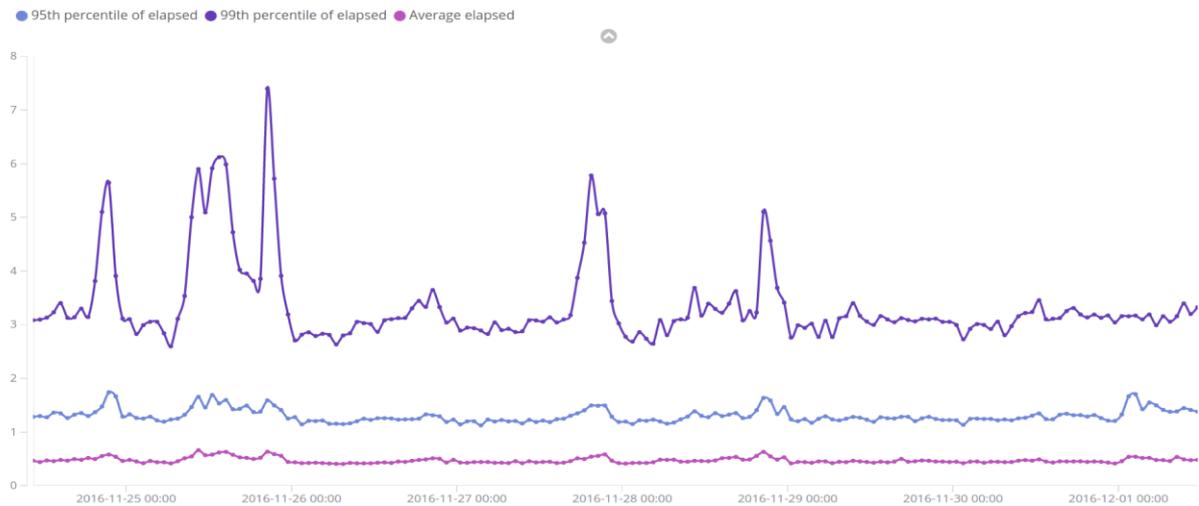
2.0 Errors and Slowdown

2.1 Black Friday Errors



* Count of errors per hour over the Black Friday Week, responses other than "200 OK" or timeouts

2.2 Black Friday Slowdown



* Backend response time (seconds), average 95th and 99th percentile per hour

2.3 Lessons Learnt

2.3.1 Fewer Outages

In previous years Intechnica identified more website outages over the Black Friday period, but in those years Black Friday was more 'compressed'. Now we are seeing a 'Black Week' effect, rather than just 'Black Friday'.

Performance monitoring needs to be extended over a longer period to understand the complexity of this change.

2.3.2 Extremes Are Still A Problem

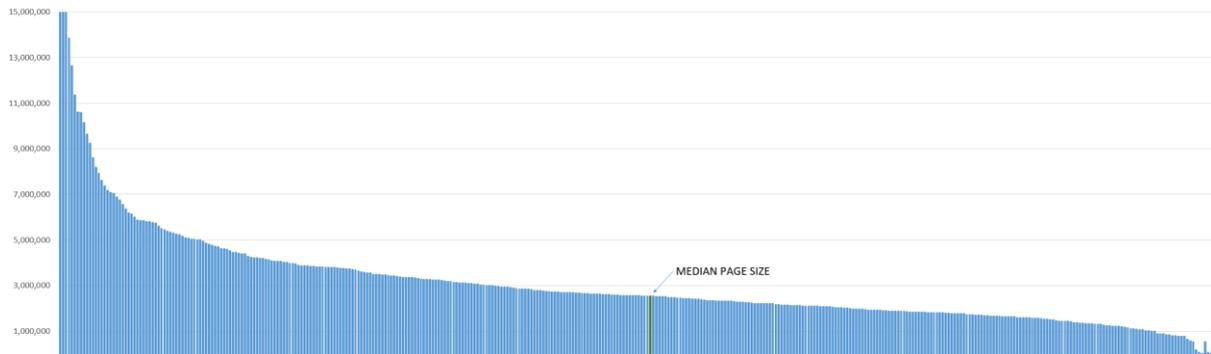
It is clear from the 95th and 99th percentiles that while less websites went down completely, many did experience slowdown. This impacts upon customer experience and conversion rates, which reduces an organisation's ability to maximise revenues during the trading period.

2.3.3 Real User Monitoring Essential

Understanding if a site behaves well at the 96th and 99th percentile and how/if this impacts customer experience is essential for making a business case for investing in performance improvements.

3.0 Page Sizes

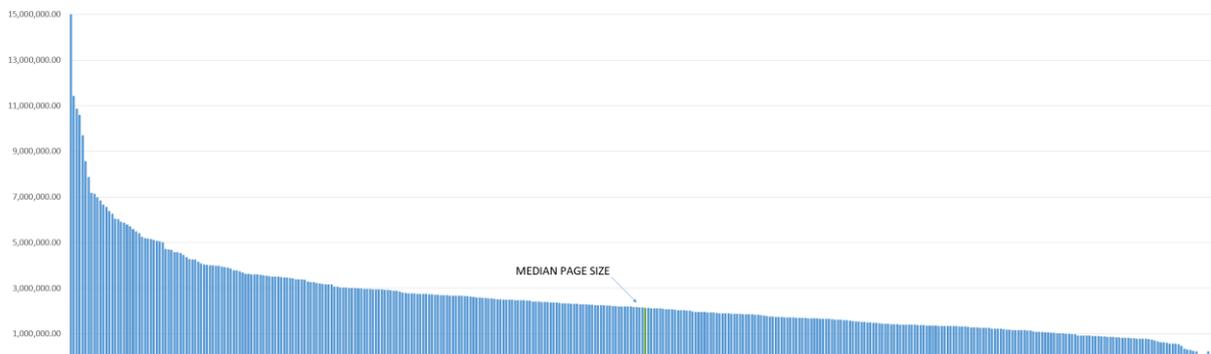
3.1 Desktop Home Page Size



* Distribution of page size in bytes, home page, 400 retailers

Median page size	~ 2.5Mb
Largest (cut off to not skew graph)	~ 32Mb
Smallest (excluding splash pages)	~ 400Kb

3.2 Mobile Home Page Size



* Distribution of page size in bytes, home page, 400 retailers

Median page size	~ 2.1Mb
Largest (cut off to not skew graph)	~ 19Mb
Smallest (excluding splash pages)	~ 200Kb

3.3 Lessons Learnt

3.3.1 Monitor, Alert, Review!

In our agile world it is understandable when bugs sometimes creep into production, but it is not acceptable to have inadequate monitoring and alerting. Ideally, automated non-functional testing should be in place to catch errors and problems before they get into production.

3.3.2 Do Not Treat Mobile As A Second Class Citizen

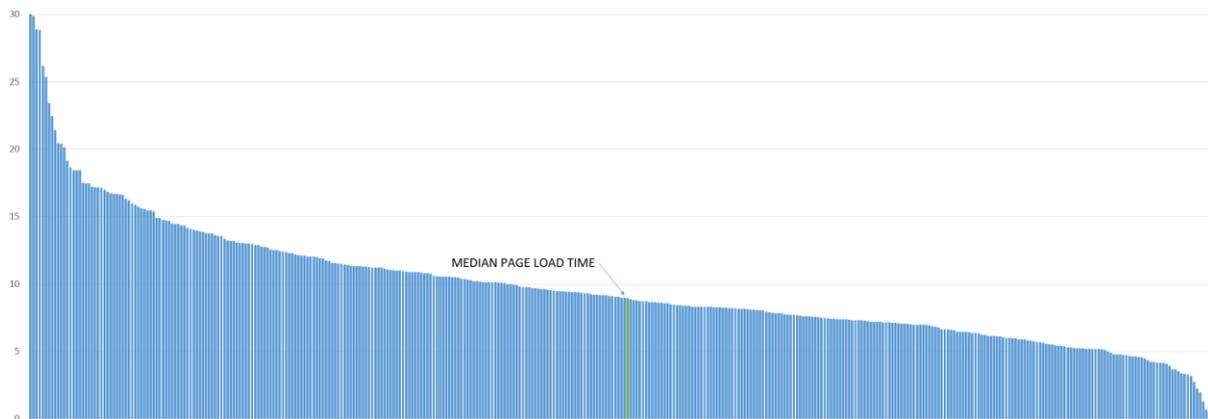
More and more transactions are taking place online every year as mobile continues to grow as the device of choice. Treating mobile as anything less than a key channel will produce negative results for businesses and destroy any attempts to develop a true omni-channel customer experience.

3.3.3 Treat 'Best Practice' Figures With Scepticism

Always benchmark against competitors to understand relative performance, especially those operating with a similar product and pricing strategy. In addition, measure what effect smaller page weights have on conversion and customer experience.

4.0 Page Load Times

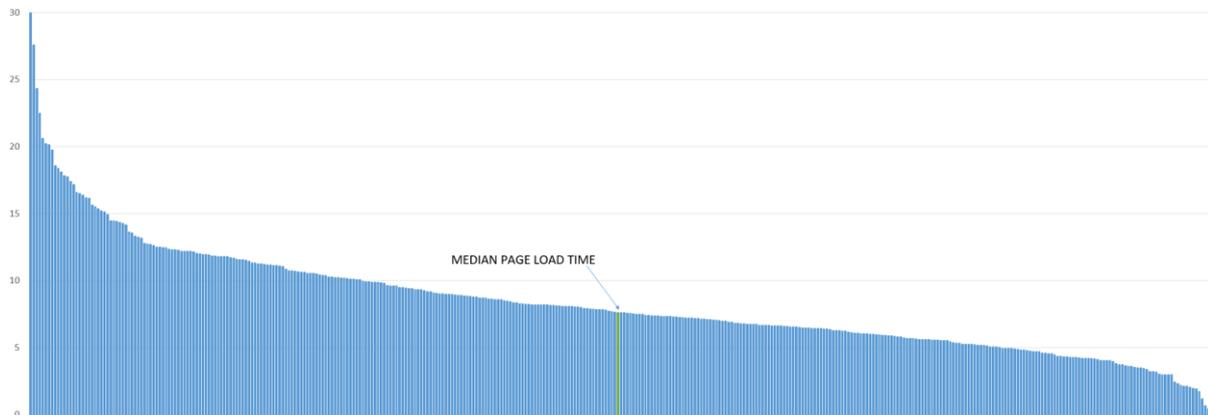
4.1 Desktop Home Page Load Time



* Distribution of page load time in seconds, home page, 400 retailers

Median page load time	~ 9 seconds
Largest (cut off to not skew graph)	~ 80 seconds
Smallest (excluding splash pages)	~ 2 seconds

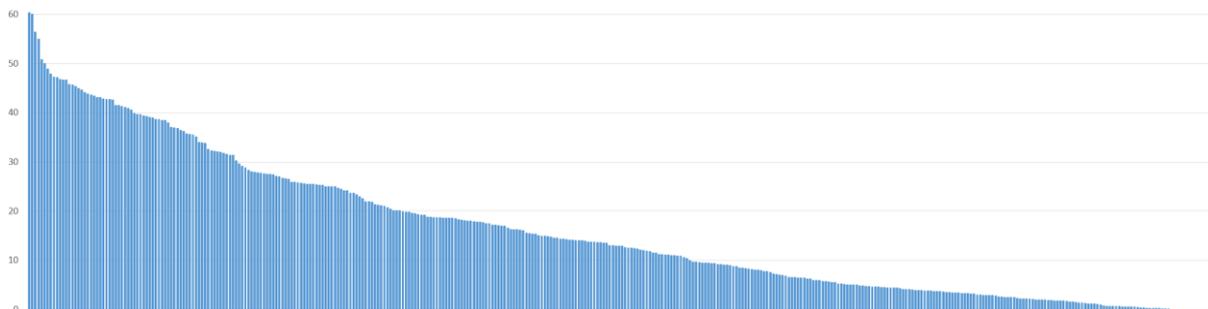
4.2 Mobile Home Page Load Time



* Distribution of page load time in seconds, home page, 400 retailers

Median page load time	~ 8 seconds
Largest (cut off to not skew graph)	~ 36 seconds
Smallest (excluding splash pages)	~ 1.5 seconds

4.3 Scope for Optimisation



* Distribution of page load time in seconds, home page, 400 retailers

- Simple optimisation of images and turning on gzip
- Best case 60% improvement, worst case 0%
- Not taking account of more advanced optimisation of third parties, tags etc.
- Consolidating files, minimising js and css

4.4 Lessons Learnt

4.4.1 Even Simple Optimisation Can Have A Large Effect

A 10-60% reduction in page size can be achieved by performing minimal image optimisation and turning on gzip, resulting in faster load speeds. Tracking these metrics and knowing their impact of optimisation is important to continued performance improvements.

4.4.2 Large Scope for Increased Conversion

Speed is a competitive advantage, it is proven time and time again that faster pages produce better customer engagement and conversion rates, helping organisations maximise peak event trading revenues.

5.0 Where Do You Stand?

Our team can review your website performance to show you how well your organisation is performing relative to your major competitors, helping you to identify and implement the improvements required to further increase your online revenues during the 2017 Black Friday trading period.

To find out how your website ranks against the rest of the retailers in this report, [contact Intechnica to request a bespoke review.](#)