Slide 1

I will present why performance is important, followed by how to calculate the scores, the most important metrics, and what was implemented.

Slide 2

Web performance is about how quickly content loads and the way it responds users to interaction.

Site speed directly affects bounce rates, conversion, revenues, user satisfaction, and search engine ranking. Performant sites increase visitor retention and user satisfaction. For example, 500 ms increase caused 20% drop in traffic for Google

It’s a good practice to test performance on same devices that the users have and choose the slowest devices.

And to test performance on regular base, monthly.

Websites are media heavy; media is the heaviest resource on the page, not js.

Slide 3

Lighthouse – lab data

Pagespeed – field data

SEO teams uses Speed Report

These reports show how fast or slow the site loads. It also indicates areas for improvement and if the measured values are considered good or bad.

Metrics are calculated for mobile and PC.

Besides performance, reports include scores also for accessibility ,best practices and SEO.

Slide 4

Web Vitals measure the speed, responsiveness, and stability of a website.

1. Largest Contentful Paint (LCP): measures how quickly the largest content element on the page (e.g. an image or video) is loaded.
2. First Input Delay (FID): measures how quickly the website responds to a user's first interaction (e.g. clicking a button).
3. Cumulative Layout Shift (CLS): measures how much the page layout shifts during loading.

Slide 5

* Time to First Byte – the time calculated from the browser’s request until the first byte of data received from a web server.

The goal is to deliver html as quickly as possible by:

- reducing the redirects

- serve from single domain

- use a better protocol, for example http2

* Resource load delay

- by adding fetchpriority or loading = eager

- less complex DOM

* Resource load time - reduce the time of bytes transferred over the network
* element render delay:

- inline critical css

- defer js

- never lazy load LCP

Slide 6

CLS occurs when the layout of a web page changes unexpectedly as the page loads, causing elements to shift or move around. This can be frustrating for users, especially if they are trying to click on a button or link that has moved due to CLS. This means to avoid adding new content or changing the layout of existing content after the page has started loading. Dimensions should be added to all images and videos.

<https://aws-www.888poker.com/poker-tournaments/types/>

Slide 7

4. First Contentful Paint (FCP) - measures how quickly the first piece of content is painted on the user's screen when they visit a website. It gives users an indication that the website is loading and responding to their request.

5. Total Blocking Time - measures the total amount of time that a webpage is blocked from responding to user input during the loading process. This can happen when a webpage is busy executing scripts or loading resources, which prevents users from being able to interact with the page.

6. Speed Index is a metric used to measure the perceived speed of a web page. It is a score that reflects how quickly a user can see the content of a page appearing on their screen while it loads.

Slide 8

1. Preconnect to required origins - When a webpage loads, it may need to establish connections with various third-party services or resources, such as ad networks, analytics tools, or content delivery networks
2. Fetchpriority high for LCP and use dimensions for all images and video
3. Delay or lazy load the images that are not currently visible on the screen. Defer offscreen images is a simple but effective way to improve the loading performance of a webpage, particularly on mobile devices where data usage and page load times are critical factors for user experience.

Slide 9

4. Serve images in next-gen formats – can significantly reduce the size of image files and improve the page load time. However, it's important to note that not all browsers support next-gen formats, so it's important to test and provide fallback options for unsupported browsers.

5. Properly size images - When an image is too large, it can take longer to load, even if it's being displayed in a smaller size on the webpage.

6. Use the same CDN for modernizr and jquery

7. For improving CLS dimensions were set for the containers in order to reserve space for the content added through JS.