

Definitions of test measurements

Environment

- Dynatrace Portal

Question

Definitions of Measurements below:

Response Time (Full page load time excluding rendering)

SSL (Handshake time + exchanging keys)

Load

Redirect

Fetch

Content

Answer

Please refer to the following definitions. For more information about test metrics, see the help pages [Report Metrics and W3C Metrics](#).

Unload

Unload time is the time elapsed from immediately before the start of the unload of the previous document until the time immediately after the unload finishes. It is defined as:

$\text{unloadEventTime} = \text{performance.timing.unloadEventEnd} - \text{performance.timing.unloadEventStart}$

Redirect

Redirect time is the time elapsed from the start time of a URL fetch that initiates a redirect until the time after the last byte of the last redirect response is received. It is defined as:

$\text{redirectTime} = \text{performance.timing.redirectEnd} - \text{performance.timing.redirectStart}$

Fetch

Fetch time is the time elapsed from immediately before the check for any relevant application caches (if HTTP Get or an equivalent is used) or the time when the resource is fetched until immediately before the DNS lookup occurs. It is defined as:

$\text{fetchTime} = \text{performance.timing.domainLookupStart} - \text{performance.timing.fetchStart}$

DNS

DNS Lookup time is the time elapsed from immediately before the DNS lookup for the domain occurs until the time immediately after the DNS lookup occurs. It is defined as:

$\text{dnsTime} = \text{performance.timing.domainLookupEnd} - \text{performance.timing.domainLookupStart}$

If the user agent already has the domain information in cache, `domainLookupStart` and `domainLookupEnd` represent the times when the user agent starts and ends the domain data retrieval from the cache.

Connect

Connect time is the time elapsed from just before the browser connects to the server until the connection to the server is established. It is defined as:

$\text{connectTime} = \text{performance.timing.connectEnd} - \text{performance.timing.connectStart}$;

SSL

SSL time is the time elapsed from just before the browser connects to the server and starts the handshake process to secure the current connection until the connection to the server is established. It is defined as:

$\text{sslTime} = \text{performance.timing.connectEnd} - \text{performance.timing.secureConnectionStart}$;

Request

Request time is the time elapsed from when the browser sends the request for the URL until the time just after the browser receives the first byte of the response. It is defined as:

$\text{requestTime} = \text{performance.timing.responseStart} - \text{performance.timing.requestStart}$

Response

Response time is the time elapsed from immediately after the prompt to unload the previous document occurs until the unload completes. It is defined as:

$\text{overallResponseTime} = \text{performance.timing.loadEventEnd} - \text{performance.timing.navigationStart}$;

DOM Interactive

Dom Interactive time is the time elapsed from immediately after the prompt to unload the previous document occurs until the time immediately before the `document.readyState` is set to interactive. It is defined as:

$\text{timeToDomInteractive} = \text{performance.timing.domInteractive} - \text{performance.timing.navigationStart}$

DOM Content Loaded

DOM Content Loaded time is the time elapsed from when the prompt to unload the previous document occurs until the time immediately after the `DOMContentLoaded` event completes. It is defined as:

$\text{timeToDomContentLoaded} = \text{performance.timing.domContentLoadedEventEnd} - \text{performance.timing.navigationStart}$;

DOM Complete

DOM Complete time is the time elapsed from when the prompt to unload the previous document occurs until the time immediately before the `document.readyState` is set to complete. It is defined as:

$\text{timeToDomComplete} = \text{performance.timing.domComplete} - \text{performance.timing.navigationStart}$

Load

Load time is the time elapsed from when the load event of the current document completes until the time immediately before the load event of the current document is fired. It is defined as:

$\text{Load} = \text{performance.timing.loadEventEnd} - \text{performance.timing.loadEventStart}$