

Waterfall View



One of the most effective tools for evaluating the performance-related user experience of accessing a webpage is a Waterfall chart. It depicts a timeline diagram of requesting and loading page resources. Waterfall charts are broadly used by performance engineers to analyze factors impacting page responsiveness granularly. It gives full visibility into every single piece of content that is downloaded from the server. It presents all the resources, and it shows them in sequence on the timeline with an indication when every request was issued and when every response was received. As a result, the duration of each load is clearly visualized in the context of other activities on the page. This allows pinpointing bottlenecks quickly on slow webpages.

In StresStimulus, waterfall charts are extended beyond analyzing a single page and single user experience. You can analyze two waterfall charts of a test iteration, page, or transaction side-by-side in conjunction with KPI of a website with a given load. Each of the charts depicts a timeline of loading the iteration/page/ transaction by any VU during any iteration of a load test.

This provides the following benefits:

1. Helps to visualize the impact of different levels of the server load on individual requests and overall user experience.

Example: in a load test with user ramp-up, compare the waterfall chart for VU1 on the first iteration (light load) and the last iteration (heavy load). Determine which requests are affected by a higher load. Recognize if load-related delays are in the server processing or on the network side.

2. Helps to understand better and/or audit the result of a load test.

Example: on a load test report, a page response time seems to be too high. To clarify this issue, analyze waterfall charts to determine which processes most of the response time was spent. Such analysis can rectify incorrect expectations and provide insight into the web system behavior.

3. Helps to evaluate better application scalability and isolate bottlenecks.

Example: a load test report indicated that a transaction becomes slow when a certain load level is reached. To further narrow down the problem area, analyze the transaction waterfall to determine processes or requests causing the most delays.

The waterfall view of the test result displays all requests in a test iteration. Page and transaction sub-reports described in the [Page and Transaction Result Tab](#) section also have waterfall views that display fewer requests, limited to a single page or transaction, but otherwise, are very similar to the test result waterfalls. A description of waterfall charts provided in the subsequent pages of this section applies for test, page, and transaction waterfalls.

[Single Waterfall Chart](#)

[Waterfall Chart Commands](#)

[Dual Waterfall Chart](#)