

How Synthetic Monitoring Calculates Response Time Averages

Information:

Environment

- Dynatrace Synthetic Classic Platform
- Synthetic Classic Portal

Solution

Q: Does Synthetic Classic calculate average response times with a geometric mean or a arithmetic mean?

A: Arithmetic mean.

Q: Does Synthetic Classic calculate an average of averages? For instance, do they calculate the response times for an hour, then average those hourly means to get the daily mean?

A: No. We add all the response times from successful tests for a given time period, then divide the sum by the number of successful tests.

Q: Are failed tests included in the response time average?

A: Failed tests have a response time of 0.0 seconds.

The response time of a failed test is not included in the average response time calculation.

A test with a zero response time is not included in the average calculation, which is an arithmetic mean of all tests given over the breakdown period specified:

- If a data point occurs at every hour, the point will be the average of all tests in that hour.
- If the chart is for the last day, the average will be $(\text{sum}(\text{every test with response time} > 0)) / (\text{total number of tests with response time} > 0)$, and not an average of the data points.