Rate Limiter Algorithms

Understand the working of various rate limiter algorithms.

We'll cover the following ∧

- Algorithms for rate limiting
  - Token bucket algorithm
    - Essential parameters
    - Advantages
    - Disadvantages
  - The leaking bucket algorithm
    - Essential parameters
    - Advantages
    - Disadvantages
  - Fixed window counter algorithm
    - Essential parameters
    - Advantages
    - Disadvantages
  - Sliding window log algorithm
    - Essential parameters
    - Advantages
    - Disadvantages
  - Sliding window counter algorithm
    - Essential parameters
    - Advantages
    - Disadvantages
- A comparison of rate-limiting algorithms

Algorithms for rate limiting

The task of a rate limiter is directed by highly efficient algorithms, each of which has distinct advantages and disadvantages. However, there is always a choice to choose an algorithm or combination of algorithms depending on what we need at a given time. While different algorithms are used in addition to those below, we'll take a look at the following popular algorithms.

- Token bucket
- Leaking bucket
- Fixed window counter
- Sliding window log
- Sliding window counter