

## Rate limiting

Rate limiting is the act of limiting the number of operations that can be performed in a given amount of time. Rate limiting is done to improve the security and the performance.

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Rate limiting can be used to prevent DoS attacks

## DoS Attack

Denial of service attack is an attack in which a malicious user tries to bring down or damage a system (by flooding the system with traffic) in order to render it unavailable to the users.

Not all DoS attacks can be prevented using Rate limiting ⇒ Eg: DDoS Attack

## DDoS Attack

Distributed Denial of service attack is a DoS attack in which the traffic flooding the target system comes from many different sources, making it much harder to defend against.

## Design

When clients issue request to the server, the server would go and check in the Redis that if the request is fine from the rate limiting point. If yes, the server would process the request else it will throw error.

