

Detecting Web DDos

Dos attack: generate many requests: impact is capped by its CPU

Types of Dos Attacks:

slowloris: Sending many partial HTTP requests to tie up server resources

HTTP Flood: Sending a large number of HTTP requests to overwhelm the server

Cache Bypass: Bypassing CDN edge servers and forcing the origin server to respond
→ central delivery network

Oversized Query: Forcing the server to process large, resource-intensive requests

Login/Form Abuse: Overloading authentication ^{with} logic attempts or password resets.

Faulty input Validation Abuse: Exploiting poorly designed input handling.

Possible Attack Motivations:

Financial Loss : Disrupt services to stop or reduce sales and revenue

Extortion : Demand payment to stop a current attack.

Hacktivism : Disruption for social or political protest

Distraction : Redirect defenders' attention while other attacks take place

Competition : Disrupt a rival's service

Denial of Wallet : Force the victim to rack up service usage costs

Reputational Damage : Cause customers to lose trust in a company

Log Analysis

By examining these logs, can uncover patterns that help distinguish between normal and malicious activity

Indicators

High Request Rate
Odd user-agents
Geographic anomalies
Burst Timestamps
Server Errors (5xx) 500-511
Logic Abuse

Targeted Resources

- likely focus on endpoints that consume the most server resources per request or are most critical to maintain site functionality.

Defense

Application Defense

- Secure Development Practices
- Challenges CAPTCHA

Network and Infrastructure Defenses

- Content Delivery Network
- Web Application Firewall (WAF)

Large-scale Mitigation

Bypassing Security Measures