

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

→ central delivery network

Cache Bypass : Bypassing CDN edge servers and forcing the origin server to respond

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

Login/Form Abuse : Overloading authentication 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