# Vegeta HTTP load testing

## CONCEPTS

Vegeta sends a constant request rate, regardless of how slow the server is. Latency grows instead of throughput dropping.

**Targets** stdin or file
↓ attack
**Results** binary stream
↓ report / plot / encode
**Output** text, JSON, HTML, CSV

Results are a binary stream: write it to a file with > or tee, since the report cannot be regenerated otherwise.

## ATTACK

**vegeta attack**
Fire requests from stdin targets

**-rate=***<n>*/*<unit>*
Requests per time unit (default 50/1s)

**-duration=***<t>*
How long to attack (0 = forever)

**-targets=***<file>*
Read targets from a file, not stdin

**-output=***<file>*
Write binary results to a file

**-rate=0 -max-workers=***<n>*
Go as fast as possible

**-header="***<Name: value>***"**
Add a request header (repeatable)

**-body=***<file>*
Body file for every request

**-timeout=***<t>*
Per-request timeout (default 30s)

**-workers=***<n>*
Initial workers (default 10, grows)

**-max-workers=***<n>*
Cap the worker pool

**-insecure**
Ignore invalid TLS certificates

## ATTACK (cont.)

**-format=json**
Targets are JSON lines

## TARGETS

### HTTP targets file

```
# one request per block, blank line
between
GET http://localhost:8080/items?x=1
X-Account-ID: 99

POST http://localhost:8080/things
Content-Type: application/json
@./newthing.json
```

In the HTTP format a body must be a file reference with @path; inline bodies are not supported. JSON targets take base64 bodies.

## REPORT

**vegeta report** *<file>*.bin
Text summary of an attack

**cat** *<file>*.bin **| vegeta report**
Read results from stdin

**-type=json**
Metrics as JSON

**-type=hist[0,100ms,200ms]**
Latency histogram with buckets

**-every=***<t>*
Print a report at each interval

### Reading the text report

| Field | Meaning |
|---|---|
| Requests | Total, rate sent, throughput |
| Latencies | Min, mean, p50/p90/p95/p99, max |
| Success | Share of 200-399 responses |
| Status Codes | Count per code; 0 = send failed |
| Error Set | Distinct errors seen |

## PLOT AND ENCODE

**vegeta plot** *<file>*.bin **>** *<file>*.html
Interactive latency-over-time chart