HTTP Timeouts

draft-loreto-http-timeout-00

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Request Timeout

• Long-polling is the asynchronous for the web
• **Problem**: no information on how long to hold a request open
  – Conservative guesses are made to avoid timeouts at intermediaries, NAT bindings, etc...

![Diagram of request timeout](image)
Timeout* Header

• Advertise client timeout requirements
  – Intermediaries can reduce Timeout according to policy or their knowledge of connection timers
  – Header gives intermediaries an explicit indicator that this is a long-lived request
  – Origin server sees lowest value

```
Timeout = "Timeout" ":" timeout-value
timeout-value = 1*DIGIT ; in seconds
```
Request-Timeout Header

- Advertise client timeout requirements
  - Intermediaries can reduce according to policy or their knowledge of connection timers
  - Header gives intermediaries an explicit indicator that this is a long-lived request
  - Origin server sees lowest value

Request-Timeout = "Request-Timeout": "timeout-value" ; in seconds
timeout-value = 1*DIGIT ; in seconds
Timeout

Client

Proxy

Gateway

Server

Timeout: **600**

Timeout: **600**

Timeout: **300**

Timeout < **300s**

Does not support Timeout header

draft-loreto-http-timeout
Idle Connection Timeout

- Idle HTTP/1.1 connections are reusable
  - ...in theory
  - in practice, not so much (see §8.1.4 of RFC 2616)

- **Problem:** Connection reuse can fail
  - The connection could be closed at the other end when a request is started
  - Bigger problem for non-idempotent requests

- Many clients seek to avoid the problem by making new connections for POST
Connection-Timeout* Header

• Hop-by-hop header
  – Token is added to the Connection header
• Both peers advertise how long they are willing to keep the connection open

Connection-Timeout = "Connection-Timeout" "::" timeout-value
timeout-value = 1*DIGIT; in seconds
Keep-Alive Header

• Hop-by-hop header
  – Token is added to the Connection header
• Both peers advertise how long they are willing to keep the connection open

• Might attempt to codify existing usage
  – ! Implementations are not consistent

Keep-Alive = "Keep-Alive" ""timeout-value" = ?
http://tools.ietf.org/id/draft-loreto-http-timeout-00

Comments