HTTP CACHING

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× Headers Preview Response Cookies Timing

▼ **General**
    Request URL: https://www.zhihu.com/
    Request Method: GET
    Status Code: 🟢 200 OK
    Remote Address: 118.178.213.186:443
    Referrer Policy: no-referrer-when-downgrade

▼ **Response Headers**   view source
    Cache-Control: private,no-store,max-age=0,no-cache,must-revalidate,post-check=0,pre-check=0
    Connection: keep-alive
    Content-Encoding: gzip
    Content-Security-Policy: default-src * blob:;img-src * data: blob:;frame-src 'self' *.zhihu.com
    *.zhihu.dev getpocket.com note.youdao.com safari-extension://com.evernote.safari.clipper-Q79
    WDW8YH9 weixin: zhihujs: v.qq.com v.youku.com www.bilibili.com;script-src 'self' *.zhihu.com
    *.google-analytics.com zhstatic.zhihu.com res.wx.qq.com 'unsafe-eval' unpkg.zhimg.com blob:;
    style-src 'self' *.zhihu.com *.zhihu.dev 'unsafe-inline';connect-src * wss:
    Content-Type: text/html; charset=utf-8
    Date: Mon, 24 Jul 2017 21:44:27 GMT
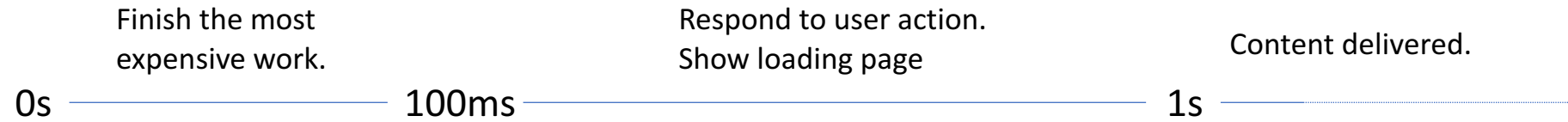   **Expires:** Fri, 02 Jan 2000 00:00:00 GMT
    Pragma: no-cache
    Server: ZWS

HTTP Caching - Why

Finish the most
expensive work.

Respond to user action.
Show loading page

Content delivered.
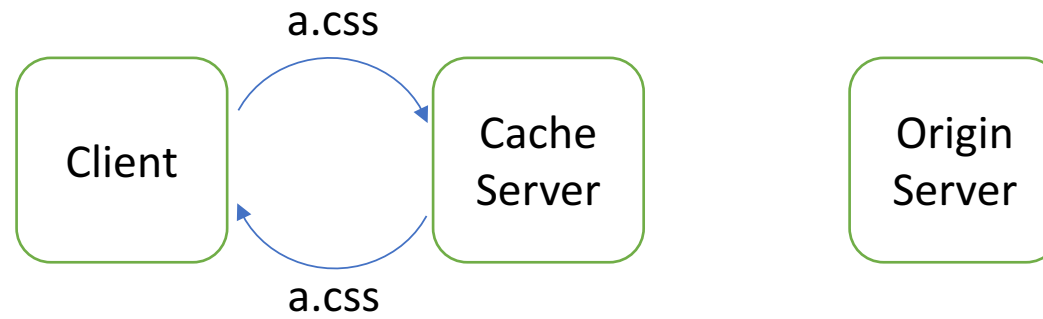
0s —————— 100ms ———————————— 1s ————

User = Traffic = Money

HTTP Caching - Why

- **Improved responsiveness**
- **Decreased network costs**

Example: 12306

HTTP Caching - How

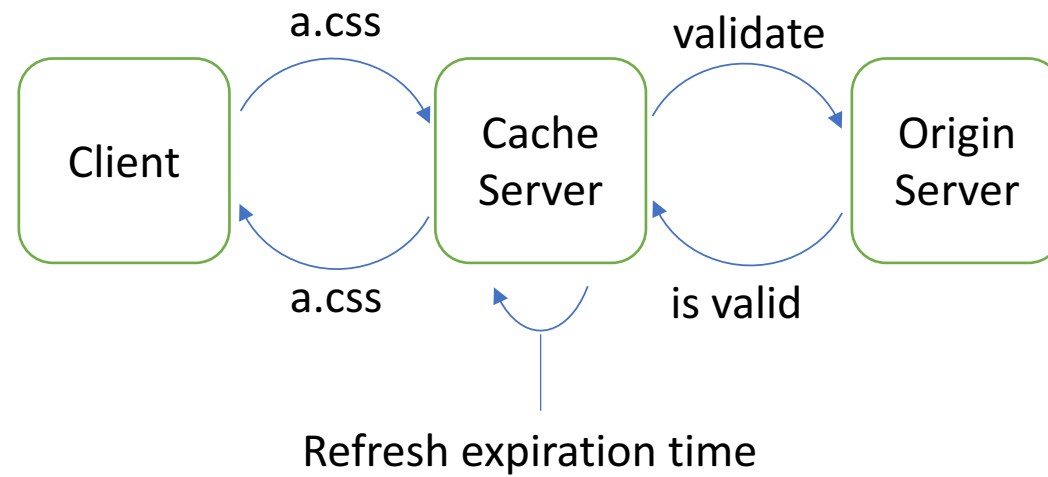**Fresh Content**

a.css

Client → Cache Server   Origin Server

a.css

HTTP Caching - How

Stale Content

Client → a.css → Cache Server → validate → Origin Server

Origin Server → is valid → Cache Server → a.css → Client

Refresh expiration time

Cache Location

- **Browser Cache**

- **Intermediary caching proxies - CDN**

- **Reverse Cache**

What can be cached?

- **Images**
- **CSS**
- **General Javascript files**
- **Downloadable Content**
- **Media Files**

What can not be cached?

- **Assets related to sensitive data (banking info, etc.)**

- **User-specific content**

- **Frequently changing content**

Cache Headers

- **Cache-Control**
- **Etag**
- **Last-Modified**
- **Expires**

Cache-Control

- **no-cache**
- **no-store**
- **public**
- **private**
- **max-age**
- **s-maxage**
- **must-revalidate**
- **proxy-revalidate**

Invalidating and Updating Cached Responses

Long Term Cache

- **Long expire time.**
- **Use fingerprint for static resources.**
- **Use CDN for static resources.**
- **Publish without replace.**

/page HTML — Cache-Control: **no-cache**

/style.3da37df.css CSS — Cache-Control: max-age=31536000

/script.8sd34ff.js JavaScript — Cache-Control: private, max-age=31536000

/photo.jpg Image — Cache-Control: max-age=86400