



HTTP

The Hypertext Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, hypermedia information systems

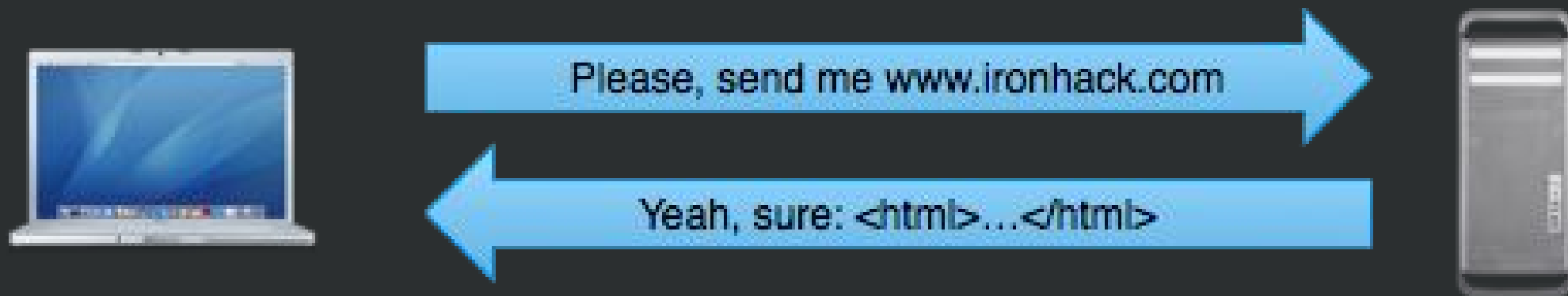
Protocol

A set of rules and regulations that determine how data is transmitted

Hypertext transfer protocol

- Application level protocol
- For text, graphics, and media
- Uses links between nodes containing text
- Request / response
- Stateless

Request/Response



HTTP Verbs

(The important ones)

- GET
- POST
- PUT
- DELETE

GET

- GET requests can be cached
- GET requests remain in the browser history
- GET requests can be bookmarked
- GET requests should never be used when dealing with sensitive data
- GET requests have length restrictions
- GET requests should be used only to retrieve data

Example request

```
GET /index.html HTTP/1.1  
Host: www.example.com
```


Example response

```
HTTP/1.1 200 OK
Date: Mon, 23 May 2005 22:38:34 GMT
Server: Apache/1.3.3.7 (Unix) (Red-Hat/Linux)
Last-Modified: Wed, 08 Jan 2003 23:11:55 GMT
ETag: "3f80f-1b6-3e1cb03b"
Content-Type: text/html; charset=UTF-8
Content-Length: 131
Accept-Ranges: bytes
Connection: close
```

```
<html>
<head>
  <title>An Example Page</title>
</head>
<body>
  Hello World, this is a very simple HTML
  document.
</body>
</html>
```

POST

- POST requests are never cached
- POST requests do not remain in the browser history
- POST requests cannot be bookmarked
- POST requests have no restrictions on data length

HTTP Status codes

- **1xx** : Informational. Request received, server is continuing the process
- **2xx** : Success
- **3xx** : Redirection. Further action must be taken
- **4xx** : Client error. The request cannot be understood
- **5xx** : Server error. The server failed to serve a valid request.

HTTP status ranges in a nutshell:

1xx: hold on

2xx: here you go

3xx: go away

4xx: you fucked up

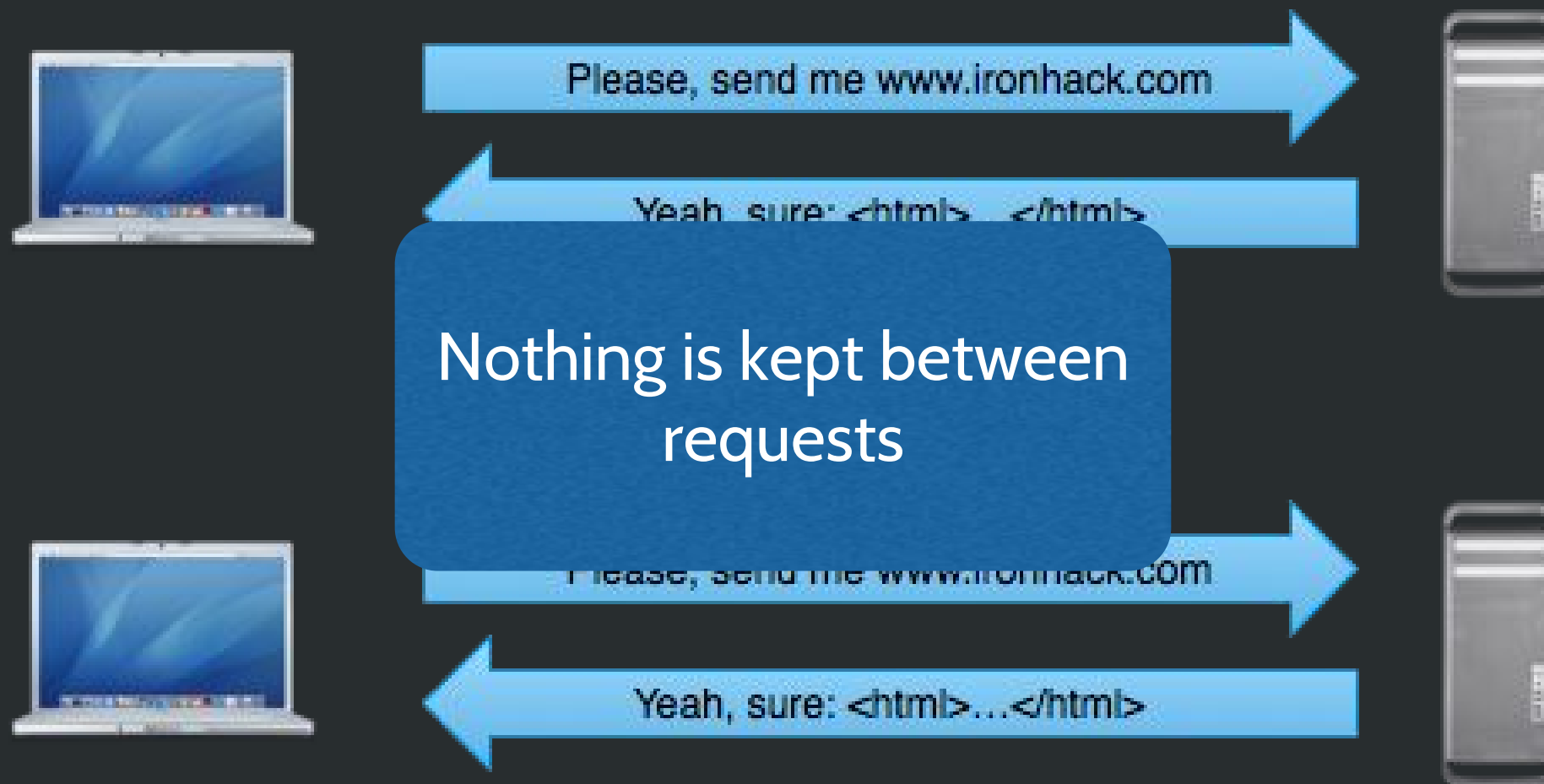
5xx: I fucked up

-via @abt_programming

Most common status codes

- 200 : OK
- 400 : Bad request
- 401 : Authentication required
- 403 : Forbidden
- 404 : Not found
- 500 : Internal server error
- 503 : Service unavailable
- 504 : Gateway error

Stateless



Sessions

Cookies provide a mechanism to maintain state

