

HTTP in Detail

Introduction

This guide covers the fundamentals of HTTP(S), requests & responses, methods, status codes, headers, cookies, and practical exercises to solidify your understanding.

1 1. What is HTTP(S)?

- **HTTP** stands for **HyperText Transfer Protocol**.
- **HTTPS** adds an **"S" for Secure**, meaning communications are encrypted.
- **Example Flag:** Found by clicking the red lock icon on a mock webpage: `THM{INVALID_HTTP_CERT}`

2 2. HTTP Requests & Responses

- **HTTP Version Shown:** HTTP/1.1
- **Key Response Header:** Content-Length – Tells the client how much data to expect in the response.

3 3. Common HTTP Methods

Method	Purpose	Example Use Case
GET	Retrieve data	Viewing a news article
POST	Create data	Submitting a new account form
PUT	Update data	Changing an email address
DELETE	Remove data	Deleting an uploaded file

4 4. HTTP Status Codes

Status Code	Meaning	When It Appears
200 OK	Success	Standard response for successful requests
201 Created	Resource created	After successfully creating a new record
401 Unauthorized	Authentication needed	When login is required
404 Not Found	Resource missing	Requested page/file doesn't exist
503 Service Unavailable	Server down	Server overloaded or undergoing maintenance

5 5. HTTP Headers Explained

Header	Purpose
User-Agent	Identifies the browser & version making the request
Content-Type	Specifies the type of returned content (HTML, JSON, etc.)
Host	Indicates the domain being requested

6 6. Cookies & the Set-Cookie Header

- **How Cookies Work:** The server sends a **Set-Cookie** header to store data on the client (browser).
- **Use Cases:**
 - Session management
 - Personalization
 - Tracking

7 7. Practical HTTP Requests (Hands-On Exercises)

Request Type	Endpoint	Action	Flag Received
GET	/room	Accessing a room	THM{YOU'RE_IN_THE_ROOM}
GET	/blog?id=1	Fetching blog post #1	THM{YOU_FOUND_THE_BLOG}
DELETE	/user/1	Deleting user ID 1	THM{USER_IS_DELETED}
PUT	/user/2	Updating username to "admin"	THM{USER_HAS_UPDATED}
POST	/login	Logging in (user: thm , pass: letmein)	THM{HTTP_REQUEST_MASTER}

- Used Ai to make the report after completing room.