

# HTTP Status Codes Cheat Sheet: A Quick Reference

January 4, 2023 / By Cassandra Lee

## HTTP STATUS CODES CHEAT SHEET



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When you're working with web applications, whether as a website administrator or a penetration tester, chances are you've had to do a web search on a three-digit code like "how to fix 404 error" and waded through the same volume of search results repeatedly. You've seen the three-digit code before, but it always slips your mind.

These three-digit codes are called **HTTP status codes**. They're crucial to understanding server behavior, conducting appropriate security tests, or refraining from overdoing them. Servers flooded with requests usually return **4XX** or **5XX** errors, which you will find below, and having too many **redirects** can also point to serious cyber space security problems.

From now on, you don't have to do those searches anymore because we have prepared this HTTP status codes cheat sheet for you. You can download this cheat sheet [here](#).

When you're ready, let's dive in.

## What Is an HTTP Status Code?

HTTP is short for "Hypertext Transfer Protocol". An HTTP status code consists of three digits. It tells you the result of a client request to a server and the semantics of the server response, including

whether the request was successful and its contents if such a payload exists. All valid status codes are between 100 and 599 inclusive.

HTTP status codes come in five classes, each of which has the same theme. In the graphic below, “you” refers to the client, and “I” to the server:

## The Top 5 Most Commonly Used Status Codes

The [RFC 9110](#) specification consists of 63 standard status codes, beyond which are custom HTTP status codes defined by server administrators. Here are the top five status codes you need to know:

- 1. **200 OK:** Ideally, you want this because it means you’ve found your desired website or the data on a submitted web form has reached its destination intact.
- 2. **301 Moved Permanently / 308 Permanent Redirect:** Websites often shorten their addresses for easy visitor access, such as omitting “www.” A shortened link redirects users to a web resource at its original, longer Uniform Resource Identifier (URI).
- 3. **404 Not Found:** The server is up, but the resource is missing, thanks to deletion or a modified URI, as is often the case for website updates.
- 4. **403 Forbidden:** The server denies the client access to a resource. I have a penchant for challenging this status code: Opening the frame source of some embedded videos in a new tab gives me this error, as the videos have a strict same-origin policy. Yet sometimes, I could download those videos from alternate source URLs found through the browser’s Inspector.
- 5. **501 Internal Server Error / 503 Service Unavailable:** The server is not functioning and can't respond to any requests you make to it. Visitors of the website are at the mercy of administrators.

## Informational Requests: 1XX

When a server returns a 1XX code, it means the server has received and understood your request, and your browser only needs to wait for the server to finish processing your data.

CODE	MEANING	DESCRIPTION
100	Continue	The server has received the request headers, and the client should proceed to send the request body.
101	Switching Protocols	The requester has asked the server to change protocols using a <a href="#">protocol upgrade mechanism</a> , and the server has agreed.
102	Processing	The server has accepted the entire request but is still processing it.
103	Early Hints	Use it with the <a href="#">Link</a> header to <a href="#">preload</a> resources while the server prepares a response.

## Success Requests: 2XX

2XX requests mean your transmitted data has reached the server or the resource you want from the server has arrived safely at your machine.

CODE	MEANING	DESCRIPTION
200	OK	The request succeeded.
201	Created	The server acknowledged a newly created resource.
202	Accepted	The server has received the client's request but is still processing it.
203	Non-Authoritative Information	The server's response to the client differs from the initial response that the server sent.
204	No Content	The server has processed the request but isn't returning any content.
205	Reset Content	The client should refresh the document sample.
206	Partial Content	The server is sending only part of the resource.
207	Multi-Status	The server response may contain multiple response codes.
208	Already Reported	The server response highlights duplicate internal contents with this status code.
226	IM Used	IM stands for "instance manipulation" in <b><u>HTTP Delta Coding</u></b> . The server has fulfilled a GET request, and the server response involves IMs.

## Redirection Requests: 3XX

When you encounter a 3XX status code, the server will redirect you to a web location different from your initial URI.

CODE	MEANING	DESCRIPTION
300	Multiple Choices	The client must choose among several possible responses for the server request.
301	Moved Permanently	The server tells the client the requested resource is now at another URI permanently.
302	Found	The server tells the client that the requested resource is temporarily at another URI.

CODE	MEANING	DESCRIPTION
303	See Other	The server doesn't redirect the client to the requested resource but to another page.
304	Not Modified	The server response is the same as in the past, so the client can continue to use the client's cached version of the server response.
305	Use Proxy (deprecated)	The client could only access the requested resource through a proxy given in the response. Deprecation was because in-band configuration of a proxy is insecure.
306	(unused/reserved)	A previous version of the HTTP/1.1 specification used this response code.
307	Temporary Redirect	<p>The server tells the client that the resource they are looking for is temporarily at another URI.</p> <p>Unlike 302, the client must access the new URI using the same HTTP method as the original URI.</p>
308	Permanent Redirect	<p>The server tells the client that the resource they are looking for is now at another URI permanently.</p> <p>Unlike 301, the client must access the new URI using the same HTTP method as the original URI.</p>

## Client Errors: 4XX

These are client errors, such as a missing page, incorrect data format, unauthorized access, or a mistake in the request.

CODE	MEANING	DESCRIPTION
400	Bad Request	The client has sent a request with incomplete, ill-constructed, or invalid data.
401	Unauthorized	The client lacks the authorization needed to access the requested resource.
402	Payment Required	A rare status code reserved for digital payment systems.
403	Forbidden	The server prohibits the client from accessing the resource.

CODE	MEANING	DESCRIPTION
404	Not Found	This code denotes a nonexistent resource on a working server.
405	Method Not Allowed	The server has received and recognized the request but has rejected the specific request method.
406	Not Acceptable	The website or web application doesn't support the client's request with a particular protocol.
407	Proxy Authentication Required	Similar to <b>401 Unauthorized</b> , but the server requires authorization via a proxy.
408	Request Timeout	The request the client sent to the server has expired.
409	Conflict	The request transmitted conflicts with the server's internal operations.
410	Gone	The resource sought by the client is permanently unavailable.
411	Length Required	The server requires the <code>Content-Length</code> header field, but it was missing in the request, so the server rejected it.
412	Precondition Failed	The server does not meet the conditions indicated by the client.
413	Payload Too Large	Request entity exceeds server limits.
414	URI Too Long	The URI requested by the client is longer than the server is willing to interpret.
415	Unsupported Media Type	The server doesn't support the media format of the requested data and thus rejects the request.
416	Requested Range Not Satisfiable	The server response cannot fulfill the range specified by the <code>Range</code> header field in the request.
417	Expectation Failed	The server cannot meet the expectation indicated by the <code>Expect</code> request header field.
418	I'm a teapot	The server sends this response to undesirable requests, such as automated queries.
421	Misdirected Request	The request went to a server unable to produce a response.

CODE	MEANING	DESCRIPTION
422	Unprocessable Entity	Semantic errors in the request prevented the server from sending the expected response.
423	Locked	The requested resource is locked.
424	Failed Dependency	The failure of a previous request doomed this request to failure.
425	Too Early	The server aborted a request that might be part of an (intentional or unintentional) replay attack.
426	Upgrade Required	The server would only perform the request after the client upgrades to one or more different protocols specified in its <code>Upgrade</code> header in a <b>426</b> response.
428	Precondition Required	The origin server requires the request to satisfy certain conditions.
429	Too Many Requests	The client has sent too many requests in a given amount of time.
431	Request Header Fields Too Large	The server is unwilling to process the request because of oversized header fields.
451	Unavailable for Legal Reasons	The server cannot legally provide the requested resource, such as a government-censored page.

## Server Errors: 5XX

These are server errors. The client has made a valid request, but the server cannot provide the requested resource.

CODE	MEANING	DESCRIPTION
500	Internal Server Error	The server has run into problems while processing the client's request.
501	Not Implemented	The server can't resolve the client's HTTP request method.
502	Bad Gateway	The server, acting as a gateway or proxy, received an invalid message from an inbound server.

CODE	MEANING	DESCRIPTION
503	Service Unavailable	The server appears non-functional and can't process the client's request.
504	Gateway Timeout	The server, acting as a gateway, fails to produce a response in time.
505	HTTP Version Not Supported	The server doesn't support the HTTP version used in the request.
506	Variant Also Negotiates	The server has an internal configuration error that leads to content conflicts.
507	Insufficient Storage	The server doesn't have enough storage to perform the HTTP method of the request.
508	Loop Detected	The server detected an infinite loop while processing the request.
510	Not Extended	The server requires further extensions to the request before fulfilling it.
511	Network Authentication Required	The client needs to get authenticated on the network to access the resource.

## Codes for Web Application Security Testing

Here are the most relevant HTTP status codes for security testing of web apps:

CODE	MEANING
200	OK
301	Moved Permanently
302	Found
400	Bad Request
401	Unauthorized
403	Forbidden



CODE	MEANING
404	Not Found
405	Method Not Allowed
500	Internal Server Error
502	Bad Gateway
503	Service Unavailable
504	Gateway Timeout

## Conclusion

This HTTP status codes cheat sheet covers all HTTP codes. We hope this HTTP error codes cheat sheet helps you troubleshoot web applications and improve their security. Once familiar with these HTTP status codes, explore the **Web Hacking** courses included in our **VIP Membership** to consolidate your learning. Have fun.

## Frequently Asked Questions

⊖ What do HTTP status codes tell you?

They tell you the server’s response to a web request, such as GET (visit a website, download a file) or POST (click a button, submit a web form).

⊕ What are the different types of HTTP status codes?

⊕ Are all HTTP status codes three digits?

⊕ What HTTP status code should I use?

⊕ How many HTTP status codes are there?

⊕ What are the common networking error codes?

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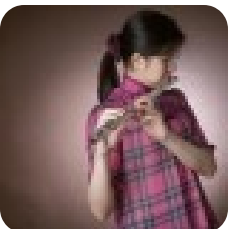


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I make connections across disciplines: cyber security, writing/journalism, art/design, music, mathematics, technology, education, psychology, and more. I've been advocating for girls and women in STEM since the 2010s, having written for Huffington Post, International Mathematical Olympiad 2016, and Ada Lovelace Day, and I'm honored to join StationX. You can find me on [LinkedIn](#) and [Linktree](#).

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