

## HTTP STATUS

SERVER
RESPONSE
CODES



## What are HTTP Status Codes?

HTTP status codes are three-digit codes that are returned by web servers to indicate the status of an HTTP request made by a client, such as a web browser or an API client.

When working with APIs, understanding server response codes is crucial for diagnosing issues and ensuring proper communication between clients and servers, and this can be done by ensuring proper responmse handling when making an API request.

## General Classes Of Responses

There are 5 general classes of server responses. The first digit of each status code indicates the general class of response, while the last two digits provide more specific information about the response.





- Informational (1xx codes): These codes indicate
  that the server has received the request and is
  processing it. They let you know your request
  has been received and is being processed, but
  the final outcome isn't quite ready yet. These
  codes are:
  - 100 Continue: Indicates that the initial part of a request has been received and the client should continue with the rest of the request.
  - 101 Switching Protocols: Indicates the server is switching protocols as requested by the client (e.g., from HTTP to WebSocket).

- Successful Responses (2xx codes): These are
  the good news codes!. They indicate that the
  requested resource has been successfully
  retrieved or modified by the server and returned
  to the client in the response. These codes are:
  - 200 OK: The request has succeeded. The meaning of success depends on the HTTP method (e.g., GET: resource retrieved, POST: resource created).
  - 201 Created: The request has been fulfilled and a new resource has been created.
  - 202 Accepted: The request has been accepted for processing, but the processing is not yet complete.
  - 204 No Content: The server successfully processed the request and is not returning any content.

- Redirection Messages (3xx codes): These codes
  indicate that the client must take additional
  steps to complete the request. For example, if a
  requested resource has been moved
  permanently, the server might respond with a
  301 Moved Permanently status code and
  redirect the client to the new URL. These codes
  are:
  - 301 Moved Permanently: The requested resource has been permanently moved to a new URL.
  - **302 Found:** The requested resource has been temporarily moved to a different URL.
  - **304 Not Modified:** The resource has not been modified since the last request, so the client can use its cached version.

- Client Errors (4xx code): These codes indicate that there was an error on the client side, such as an invalid request or missing authentication credentials. These codes are:
  - **400 Bad Request:** The server cannot process the request due to client error (e.g., malformed request syntax).
  - **401 Unauthorized:** Authentication is required and has failed or has not yet been provided.
  - **403 Forbidden:** The client does not have permission to access the requested resource.
  - **404 Not Found:** The requested resource could not be found on the server.
  - **405 Method Not Allowed:** The request method is not supported for the requested resource.

- Server Errors (5xx codes): These codes indicate that the server has received the request and is processing it. They let you know your request has been received and is being processed, but the final outcome isn't quite ready yet. These codes are:
  - 500 Internal Server Error: The server encountered an unexpected condition that prevented it from fulfilling the request.
  - **501 Not Implemented:** The server does not support the functionality required to fulfill the request.
  - **502 Bad Gateway:** The server, while acting as a gateway or proxy, received an invalid response from an inbound server.

- **503 Service Unavailable:** The server is currently unable to handle the request due to temporary overload or maintenance.
- **504 Gateway Timeout:** The server, while acting as a gateway or proxy, did not receive a timely response from an upstream server.

Understanding response codes help developers identify and diagnose issues quickly. For example, when an API call fails, the response code can indicate whether the problem is with the client, the server, or the network. This speeds up the debugging process and helps in identifying where to focus the troubleshooting efforts.

It also aids following API best practices of proper usage and interpretation of response codes. This ensures that your application adheres to industry standards and communicates effectively with other systems.



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