



Better Monitoring with WebWatchBot Series

Monitoring Failures: Interpreting HTTP Status Codes

HTTP status codes are a standardized set of numbers a web server uses to respond to a web browser in a concise manner.

When a user enters a URL in the address field of a web browser and clicks “Go”, the browser is making a request from a web server. In response, the web server sends back a status code and in most cases some text that is in HTML format.

The status code makes it easy to know exactly what happened at a particular moment on a web server and help website monitoring software determine how to act.

HTTP status codes are broken up in groups by number:

- 100-199: Informational
- 200-299: Success
- 300-399: Redirection
- 400-499: Client Error
- 500-599: Server Error

The 100 HTTP status codes are typically used by proxies to indicate that the request should continue and are infrequently encountered by the Internet population as a whole. When monitoring, HTTP status codes in this group should normally indicate success.

The 200 HTTP status code group indicates the perfectly fulfilled request 99.99999% of the time. In the monitoring of a website, HTTP status codes in this group should normally indicate success unless one is not expecting for example, “HTTP 204: no info to return” – an odd and rare HTTP status code.

The 300 HTTP status codes always indicate redirection or the server’s attempt to fulfill a request by sending the client to a different location or web page with the exception of “300: server couldn't decide what to return”. HTTP status code 300 could be handled as a failure, where as all other 300s should be handled as success with additional internal actions to be taken.

The 400 HTTP status code group indicates an error on the part of the requester, typically the web browser. Failures from this group include the well known “404: object not found” which can mean that the web page was moved, deleted, or the requested URL was mistyped. Other important 400 HTTP status codes include “401: access denied” which indicates that the requested URL requires authentication: the client should provide authentication credentials or the authentication credentials provided were incorrect.

The 500 HTTP status codes denote an error fulfilling the request on the web server. “500: internal server error” is a common error that typically means that an error may have occurred in the web server software or a web application running within the web server software. “503: temporarily overloaded” is considered a severe error which should be addressed immediately as it can mean that the web server is under malicious attack or a web application contains an error that is causing total failure to fulfill new requests.

In conclusion, HTTP status codes provide a quick and easy way to categorize and identify the state of a web server at any given moment. By configuring website monitoring software to trigger success or failure based on HTTP status codes, one can have a good handle on the health of a server.

¹ Status codes are taken from RFC 2616: <http://www.ietf.org/rfc/rfc2616.txt>