Vulnerability analysis
The vulnerability is a blind OS command injection on the POST parameter "target" of the measurehops.php script. Such a script unsafely invokes the traceroute command with the user-provided input, then it counts the number of outputted lines and decreases such a number by 1. For the way traceroute output is formatted, this corresponds to counting the number of hops. We can test the vulnerability (with Burp Repeater) by sending the HTTP body "target=localhost" and "target=localhost;echo" and observe that the responses are 1 hop for the first request and 2 hops for the second one. We can also put other \n's in the injected echo command (echo "\n", echo "\n\n", etc.), and observe that the number of hops increases for each \n.