Multiple CRLF Injection / HTTP Response Splitting Vulnerabilities In Google AdWords

14th Dec, 2006

Vendor Name: Google
Product Name: Google AdWords (https://adwords.google.com/)

1. Descriptions:

Google AdWords is vulnerable to a new form of application attack technique called HTTP Response splitting (aka CRLF Injection). HTTP Response Splitting enables an attacker to alter the HTTP response header structure which can lead to wide range of attacks.

Although not limited to, it includes attacks such as web cache poisoning, temporary defacement, hijacking web pages or cross-site scripting (XSS). This happens since the user input is injected into the value section of HTTP header without properly escaping/removing CRLF characters which can lead to two HTTP responses instead of one response.

2. Affected Links:

GET /select/ProfessionalWelcome?**hl=%0d%0afakeheader&null=Go HTTP/1.0**

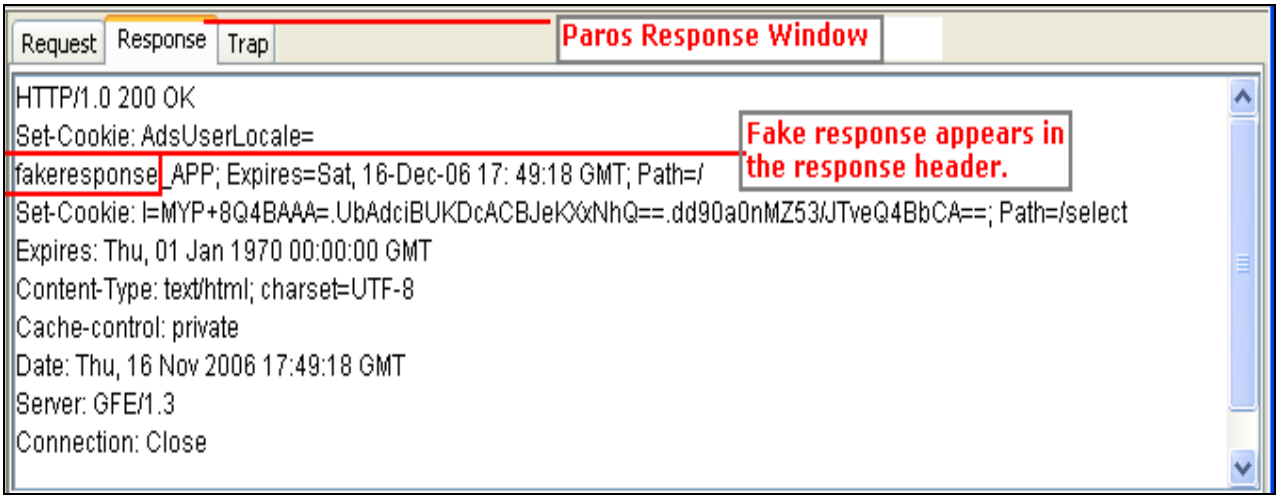
GET /select/Login?hl= **hl=%0d%0afakeheader&null=Go HTTP/1.0**

3. Proof-of-concept:

[Request Details]

Screenshot a: Custom HTTP response added to "hl" parameter

[Response Header]



4. Solution:

Sanitize CR(0x13) and LF(0x10) from the user input or properly encode the output in order to prevent the injection of custom.

5. History:

11/20/2006 – Vendor Reported
11/20/2006 – Vendor replied back and asked for time to investigate
11/21/2006 – Vendor confirmed the report and asked for time to fix

11/21/2006 – Vendor replied saying, fix will be applied before 14th Dec
12/14/2006 – Public Disclosure

6. Credits:

Debasis Mohanty
d3basis.m0hanty@gmail.com