rietsparker

10/13/2020 12:59:07 AM (UTC-08:00)

Detailed Scan Report

https://heybuddy.cf/

Scan Time : 10/13/2020 12:13:27 AM (UTC-08:00)

Scan Duration: 00:00:45:39Total Requests: 13,759Average Speed: 5.0r/s

Risk Level: **MEDIUM**

15
IDENTIFIED

CONFIRMED

O CRITICAL

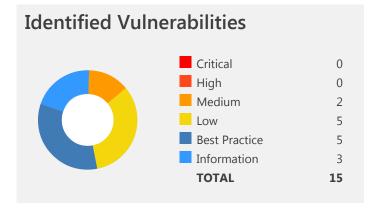
O HIGH 2 медіим

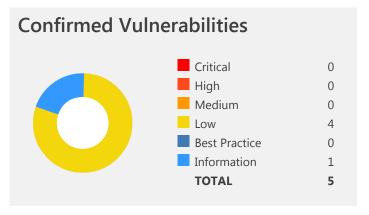
LOW

•

5 BEST PRACTICE

INFORMATION





Vulnerability Summary

CONFIR	RM	VULNERABILITY	METHOD	URL	PARAMETER
1	~	HTTP Strict Transport Security (HSTS) Policy Not Enabled	GET	https://heybuddy.cf/	
1	~	SSL/TLS Not Implemented	GET	https://heybuddy.cf/	
<u> </u>	~	[Possible] Cross-site Request Forgery	GET	https://heybuddy.cf/	
1	~	Cookie Not Marked as HttpOnly	GET	https://heybuddy.cf/	
1	 ~	Cookie Not Marked as Secure	GET	https://heybuddy.cf/	
1	~	Insecure Frame (External)	GET	https://heybuddy.cf/	
1	~	Internal Server Error	POST	https://heybuddy.cf/cdn-cgi/challenge-platform/h/g/generate/ov 1/0.5590507158990875:1602571552:fef027055796fa7bc60a72f9f8 7e96cdde38ba4732e77c1d52f43aec8a90faf9/5e17422bbd3a332 9/fe6564ab979041d	
1	Ô	Content Security Policy (CSP) Not Implemented	GET	https://heybuddy.cf/	
1	Ô	Expect-CT Not Enabled	GET	https://heybuddy.cf/cdn-cgi/styles/cf.errors.css	
1	Ô	Missing X-XSS- Protection Header	GET	https://heybuddy.cf/	
1	Ô	Referrer-Policy Not Implemented	GET	https://heybuddy.cf/	
1	Ô	SameSite Cookie Not Implemented	GET	https://heybuddy.cf/	
1	0	Expect-CT in Report Only Mode	GET	https://heybuddy.cf/	
1	0	Web Application Firewall Detected	GET	https://heybuddy.cf/%3Cscript%3Ealert(0)%3C/script%3E	URI-BASED
1	0	Forbidden Resource	GET	https://heybuddy.cf/	

1. HTTP Strict Transport Security (HSTS) Policy Not Enabled

MEDIUM P 1

Netsparker identified that HTTP Strict Transport Security (HSTS) policy is not enabled.

The target website is being served from not only HTTPS but also HTTP and it lacks of HSTS policy implementation.

HTTP Strict Transport Security (HSTS) is a web security policy mechanism whereby a web server declares that complying user agents (such as a web browser) are to interact with it using only secure (HTTPS) connections. The HSTS Policy is communicated by the server to the user agent via a HTTP response header field named "Strict-Transport-Security". HSTS Policy specifies a period of time during which the user agent shall access the server in only secure fashion.

When a web application issues HSTS Policy to user agents, conformant user agents behave as follows:

- Automatically turn any insecure (HTTP) links referencing the web application into secure (HTTPS) links. (For instance, http://example.com/some/page/ will be modified to https://example.com/some/page/ before accessing the server.)
- If the security of the connection cannot be ensured (e.g. the server's TLS certificate is self-signed), user agents show an error message and do not allow the user to access the web application.

Vulnerabilities

1.1. https://heybuddy.cf/

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 2094.0462 Total Bytes Received: 13088 Body Length: 12157 Is Compressed: No

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e174358bce33328-CDG
cf-request-id: 05c2686b7300003328b118d200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257326
0"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=dc7cb98938cc194c4435978043222b3d21602573259; expires=Thu, 12-Nov-20 07:14:19 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:14:19 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Remedy

Configure your webserver to redirect HTTP requests to HTTPS.

i.e. for Apache, you should have modification in the httpd.conf. For more configurations, please refer to External References section.

External References

- Wikipedia HTTP Strict Transport Security
- Configure HSTS (HTTP Strict Transport Security) for Apache/Nginx
- HTTP Strict Transport Security (HSTS) HTTP Header
- Mozilla SSL Configuration Generator

CLASSIFICATION

OWASP 2013	<u>A6</u>
OWASP 2017	<u>A3</u>
SANS Top 25	<u>523</u>
CAPEC	217
WASC	4
ISO27001	<u>A.14.1.2</u>

2. SSL/TLS Not Implemented



Netsparker detected that SSL/TLS is not implemented.

Impact

An attacker who is able to intercept your - or your users' - network traffic can read and modify any messages that are exchanged with your server.

That means that an attacker can see passwords in clear text, modify the appearance of your website, redirect the user to other web pages or steal session information.

Therefore no message you send to the server remains confidential.

Vulnerabilities

2.1. https://heybuddy.cf/

Certainty

Request

[NETSPARKER] SSL Connection

Response

Response Time (ms): 1 Total Bytes Received: 27 Body Length: 0 Is Compressed: No

[NETSPARKER] SSL Connection

Remedy

We suggest that you implement SSL/TLS properly, for example by using the Certbot tool provided by the Let's Encrypt certificate authority. It can automatically configure most modern web servers, e.g. Apache and Nginx to use SSL/TLS. Both the tool and the certificates are free and are usually installed within minutes.



PCI DSS v3.2	<u>6.5.4</u>
OWASP 2013	<u>A6</u>
OWASP 2017	<u>A3</u>
SANS Top 25	311
CAPEC	<u>217</u>
WASC	<u>4</u>
НІРАА	<u>164.306</u>
ISO27001	<u>A.14.1.3</u>

CVSS 3.0 SCORE

Base	6.8 (Medium)
Temporal	6.1 (Medium)
Environmental	6.1 (Medium)

CVSS Vector String

CVSS:3.0/AV:A/AC:H/PR:N/UI:N/S:U/C:H/I:H/A:N/E:P/RL:O/RC:C

CVSS 3.1 SCORE

Base	6.8 (Medium)
Temporal	6.1 (Medium)
Environmental	6.1 (Medium)

CVSS:3.1/AV:A/AC:H/PR:N/UI:N/S:U/C:H/I:H/A:N/E:P/RL:O/RC:C

3. [Possible] Cross-site Request Forgery



Netsparker identified a possible Cross-Site Request Forgery.

CSRF is a very common vulnerability. It's an attack which forces a user to execute unwanted actions on a web application in which the user is currently authenticated.

Impact

Depending on the application, an attacker can mount any of the actions that can be done by the user such as adding a user, modifying content, deleting data. All the functionality that's available to the victim can be used by the attacker. Only exception to this rule is a page that requires extra information that only the legitimate user can know (such as user's password).

Vulnerabilities

3.1. https://heybuddy.cf/

Form Action(s)

 /?_cf_chl_captcha_tk_=ceea7d82a0008dd289eaf92446b9a430e9cb2d97-1602573211-0-AZtMuvukB3BhpeWkoDuyb6oFMKUEwxdXsnu-

KxNJLWcOPQPwyO82F1JIU7cdg5qohK57ttfXKQcj_HyOaYbDKwm05Rh5YDAEGvFDpVxi18Fd7ZRXAu6LhnhJo1j9OlGAmioZmPSb4Vi5Y29Gw266M2XUFRGE2ikCLZTwDiaJLGY8klXbo1lQHd0jAIXJCSyXqJ5Ym-GalFRTb4_B_1AY-HMLl-XaP5ddSovJwFghi4Es2-QrWC-ngxENZbFLrxSN6MBb5_3N8f5rMoPFuNp-

 $I0y3cBHeQbFILJ03q4_Rfg1YkYnblIGiUNsi_RRFCVBj7Upc7xOHzlefV7dEMUKoTOwUfqVG4RZQ9Ln-iyAK8WQ-tbvR99GOBS6hb4EpUaHFKAMv_me1OLB7S9Wd0gJKobPEsL6QHLNkfa17Hpg4TGUqXJwuVs8VwoAMPSfWcnK87bTAv-GytYHD-Tb-4DABueb3klki0w$

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1399.9188 Total Bytes Received: 13129 Body Length: 12198 Is Compressed: No

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Remedy

- Send additional information in each HTTP request that can be used to determine whether the request came from an authorized source. This "validation token" should be hard to guess for attacker who does not already have access to the user's account. If a request is missing a validation token or the token does not match the expected value, the server should reject the request.
- If you are posting form in ajax request, custom HTTP headers can be used to prevent CSRF because the browser prevents sites from sending custom HTTP headers to another site but allows sites to send custom HTTP headers to themselves using XMLHttpRequest.
 - For native XMLHttpRequest (XHR) object in JavaScript;

```
xhr = new XMLHttpRequest();
xhr.setRequestHeader('custom-header', 'valueNULL');
```

For JQuery, if you want to add a custom header (or set of headers) to

a. individual request

```
$.ajax({
    url: 'foo/bar',
    headers: { 'x-my-custom-header': 'some value' }
});
```

b. every request

```
$.ajaxSetup({
    headers: { 'x-my-custom-header': 'some value' }
});
OR
$.ajaxSetup({
    beforeSend: function(xhr) {
        xhr.setRequestHeader('x-my-custom-header', 'some value');
    }
});
```

External References

• OWASP Cross-Site Request Forgery (CSRF)

Remedy References

• OWASP Cross-Site Request Forgery (CSRF) Prevention Cheat Sheet

CLASSIFICATION

PCI DSS v3.2	6.5.9
OWASP 2013	<u>A8</u>
OWASP 2017	<u>A5</u>
SANS Top 25	<u>352</u>
CAPEC	62
WASC	9
НІРАА	<u>164.306(A)</u>
ISO27001	<u>A.14.2.5</u>

4. Cookie Not Marked as HttpOnly

LOW P 1 CONFIRMED 1

Netsparker identified a cookie not marked as HTTPOnly.

HTTPOnly cookies cannot be read by client-side scripts, therefore marking a cookie as HTTPOnly can provide an additional layer of protection against cross-site scripting attacks.

Impact

During a cross-site scripting attack, an attacker might easily access cookies and hijack the victim's session.

Vulnerabilities

4.1. https://heybuddy.cf/

CONFIRMED

Identified Cookie(s)

- cf_chl_1
- cf_chl_prog
- cf_chl_rc_i

Cookie Source

JavaScript

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1399.9188 Total Bytes Received: 13129 Body Length: 12198 Is Compressed: No

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Actions to Take

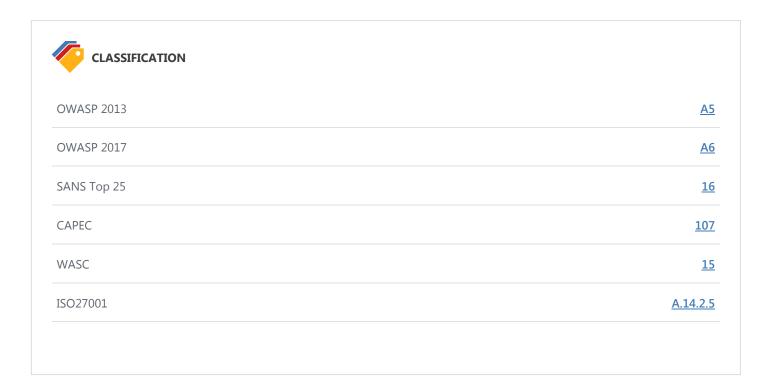
- 1. See the remedy for solution.
- 2. Consider marking all of the cookies used by the application as HTTPOnly. (*After these changes javascript code will not be able to read cookies*.)

Remedy

Mark the cookie as HTTPOnly. This will be an extra layer of defense against XSS. However this is not a silver bullet and will not protect the system against cross-site scripting attacks. An attacker can use a tool such as XSS Tunnel to bypass HTTPOnly protection.

External References

- Netsparker Security Cookies HTTPOnly Flag
- OWASP HTTPOnly Cookies
- MSDN ASP.NET HTTPOnly Cookies



5. Cookie Not Marked as Secure

LOW 🕒 1 CONFIRMED 🗘 1

Netsparker identified a cookie not marked as secure, and transmitted over HTTPS.

This means the cookie could potentially be stolen by an attacker who can successfully intercept and decrypt the traffic, or following a successful man-in-the-middle attack.

Impact

This cookie will be transmitted over a HTTP connection, therefore if this cookie is important (*such as a session cookie*), an attacker might intercept it and hijack a victim's session. If the attacker can carry out a man-in-the-middle attack, he/she can force the victim to make an HTTP request to steal the cookie.

Vulnerabilities

5.1. https://heybuddy.cf/

CONFIRMED

Identified Cookie(s)

- cf_chl_1
- cf_chl_prog
- cf_chl_rc_i

Cookie Source

JavaScript

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1399.9188 Total Bytes Received: 13129 Body Length: 12198 Is Compressed: No

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Actions to Take

- 1. See the remedy for solution.
- 2. Mark all cookies used within the application as secure. (If the cookie is not related to authentication or does not carry any personal information, you do not have to mark it as secure.)

Remedy

Mark all cookies used within the application as secure.

Required Skills for Successful Exploitation

To exploit this issue, the attacker needs to be able to intercept traffic. This generally requires local access to the web server or to the victim's network. Attackers need to be understand layer 2, have physical access to systems either as waypoints for the traffic, or have locally gained access to to a system between the victim and the web server.

External References

- Netsparker Security Cookies Secure Flag
- .NET Cookie.Secure Property
- How to Create Totally Secure Cookies



PCI DSS v3.2	6.5.10
OWASP 2013	<u>A6</u>
OWASP 2017	<u>A3</u>
SANS Top 25	614
CAPEC	<u>102</u>
WASC	<u>15</u>
ISO27001	A.14.1.2

CVSS 3.0 SCORE

Base	2 (Low)
Temporal	2 (Low)
Environmental	2 (Low)

CVSS Vector String

CVSS:3.0/AV:P/AC:H/PR:N/UI:N/S:U/C:L/I:N/A:N

CVSS 3.1 SCORE

Base	2 (Low)
Temporal	2 (Low)
Environmental	2 (Low)

CVSS:3.1/AV:P/AC:H/PR:N/UI:N/S:U/C:L/I:N/A:N

6. Insecure Frame (External)



Netsparker identified an external insecure or misconfigured iframe.

Impact

IFrame sandboxing enables a set of additional restrictions for the content within a frame in order to restrict its potentially malicious code from causing harm to the web page that embeds it.

The Same Origin Policy (SOP) will prevent JavaScript code from one origin from accessing properties and functions - as well as HTTP responses - of different origins. The access is only allowed if the protocol, port and also the domain match exactly.

Here is an example, the URLs below all belong to the same origin as http://site.com:

http://site.com/ http://site.com/ http://site.com/my/page.html

Whereas the URLs mentioned below aren't from the same origin as http://site.com:

http://www.site.com (a sub domain)
http://site.org (different top level domain)
https://site.com (different protocol)
http://site.com:8080 (different port)

When the sandboxattribute is set, the iframe content is treated as being from a unique origin, even if its hostname, port and protocol match exactly. Additionally, sandboxed content is re-hosted in the browser with the following restrictions:

- · Any kind of plugin, such as ActiveX, Flash, or Silverlight will be disabled for the iframe.
- Forms are disabled. The hosted content is not allowed to make forms post back to any target.
- Scripts are disabled. JavaScript is disabled and will not execute.
- · Links to other browsing contexts are disabled. An anchor tag targeting different browser levels will not execute.
- Unique origin treatment. All content is treated under a unique origin. The content is not able to traverse the DOM or read cookie information.

When the sandboxattribute is not set or not configured correctly, your application might be at risk.

A compromised website that is loaded in such an insecure iframe might affect the parent web application. These are just a few examples of how such an insecure frame might affect its parent:

- It might trick the user into supplying a username and password to the site loaded inside the iframe.
- It might navigate the parent window to a phishing page.
- It might execute untrusted code.
- It could show a popup, appearing to come from the parent site.

Sandboxcontaining a value of:

- allow-same-originwill not treat it as a unique origin.
- allow-top-navigationwill allow code in the iframe to navigate the parent somewhere else, e.g. by changing parent.location.
- allow-formswill allow form submissions from inside the iframe.
- allow-popupswill allow popups.
- allow-scriptswill allow malicious script execution however it won't allow to create popups.

Vulnerabilities

6.1. https://heybuddy.cf/

CONFIRMED

Frame Source(s)

- https://assets.hcaptcha.com/captcha/v1/0d0e5c3/static/hcaptchacheckbox.html#id=0bvboq5oys4&host=heybuddy.cf&sentry=true&reportapi=https%3A%2F%2Faccounts.hcaptcha.com&recaptch 8bfa-4fc9-8ee5-9c91c6276dff
- https://assets.hcaptcha.com/captcha/v1/0d0e5c3/static/hcaptchachallenge.html#id=0bvboq5oys4&host=heybuddy.cf&sentry=true&reportapi=https%3A%2F%2Faccounts.hcaptcha.com&recaptch 8bfa-4fc9-8ee5-9c91c6276dff

Parsing Source

DOM Parser

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate
Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1399.9188 Total Bytes Received: 13129 Body Length: 12198 Is Compressed: No

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Remedy

• Apply sandboxing in inline frame

<iframe sandbox src="framed-page-url"></iframe>

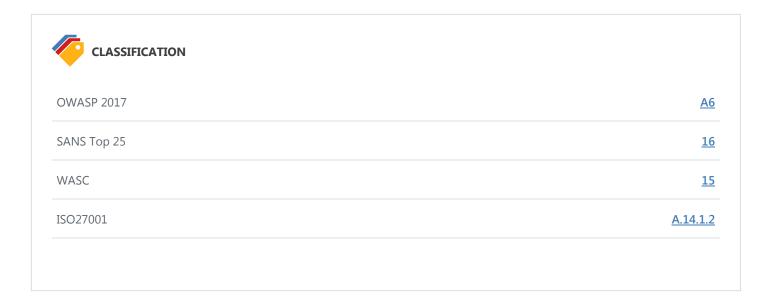
• For untrusted content, avoid the usage of seamlessattribute and allow-top-navigation, allow-popups and allow-scripts in sandbox attribute.

External References

• HTML5 Security Cheat Sheet

Remedy References

- How to Safeguard your Site with HTML5 Sandbox
- Play safely in sandboxed IFrames



7. Internal Server Error



Netsparker identified an internal server error.

The server responded with an HTTP status 500, indicating there is a server-side error. Reasons may vary, and the behavior should be analyzed carefully. If Netsparker is able to find a security issue in the same resource, it will report this as a separate vulnerability.

Impact

The impact may vary depending on the condition. Generally this indicates poor coding practices, not enough error checking, sanitization and whitelisting. However, there might be a bigger issue, such as SQL injection. If that's the case, Netsparker will check for other possible issues and report them separately.

Vulnerabilities

7.1. https://heybuddy.cf/cdn-cgi/challenge-platform/h/g/generate/ov1/0.5590507158990875:160 2571552:fef027055796fa7bc60a72f9f87e96cdde38ba4732e77c1d52f43aec8a90faf9/5e17422bbd3 a3329/fe6564ab979041d

CONFIRMED

Method	Parameter	Value
POST	v_5e17422bbd3a3329	expr 268409241 - 27791;

Request

POST /cdn-cgi/challenge-platform/h/g/generate/ov1/0.5590507158990875:1602571552:fef027055796fa7bc60a72f 9f87e96cdde38ba4732e77c1d52f43aec8a90faf9/5e17422bbd3a3329/fe6564ab979041d HTTP/1.1

Host: heybuddy.cf

Accept: */*

Accept-Encoding: gzip, deflate
Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache
CF-Challenge: fe6564ab979041d

Content-Length: 44

Content-Type: application/x-www-form-urlencoded

Cookie: cf_chl_seq_fe6564ab979041d=5a5272058afc58e; __cfduid=d24f5fe1adf7901d3df9a127e65c2de20160257321
1; PHPSESSID=d62f875a79f9461f8eee37c381318c1a; access=1; ad-con=%7B%26quot%3Bdate%26quot%3B%3A%26quot%3
B2020-10-13%26quot%3B%2C%26quot%3Bads%26quot%3B%3A%5B%5D%7D; mode=day; src=1; _us=1602660165; cf_chl_cc
_LxWScetPgMvD=wZVmhqrkmQUe; cf_chl_prog=e; cf_chl_rc_i=150

Origin: https://heybuddy.cf Referer: https://heybuddy.cf/

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

77 Safari/537.36 X-Scanner: Netsparker

v 5e17422bbd3a3329=expr+268409241+-+27791%3b

Response

Response Time (ms): 7858.1541 Total Bytes Received: 577 Body Length: 8 Is Compressed: No

HTTP/1.1 500 Internal Server Error

cf-request-id: 05c280aa5d000006c1ce1d2200000001
NEL: {"report_to":"cf-nel","max_age":604800}

CF-RAY: 5e176a23ccaa06c1-LHR

Server: cloudflare Connection: keep-alive

 $Report-To: \ \{"endpoints": [\{"url": "https:\/\/a.nel.cloudflare.com\/report?lkg-colo=21\&lkg-time=160257484\} \} = 160257484 \}$

9"}], "group": "cf-nel", "max_age":604800}

Content-Length: 8

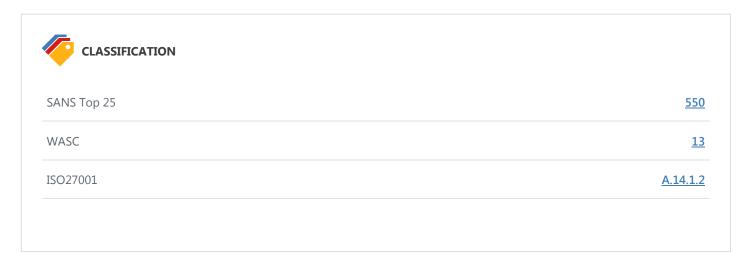
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"

Content-Type: text/plain; charset=UTF-8 Date: Tue, 13 Oct 2020 07:40:48 GMT

Vary: Accept-Encoding

Invalid.

Analyze this issue and review the application code in order to handle unexpected errors; this should be a generic practice, which does not disclose further information upon an error. All errors should be handled server-side only.



8. Content Security Policy (CSP) Not Implemented

BEST PRACTICE 🖞 1

CSP is an added layer of security that helps to mitigate mainly Cross-site Scripting attacks.

CSP can be enabled instructing the browser with a Content-Security-Policy directive in a response header;

```
Content-Security-Policy: script-src 'self'; or in a meta tag;
```

```
<meta http-equiv="Content-Security-Policy" content="script-src 'self';">
```

In the above example, you can restrict script loading only to the same domain. It will also restrict inline script executions both in the element attributes and the event handlers. There are various directives which you can use by declaring CSP:

- **script-src:**Restricts the script loading resources to the ones you declared. By default, it disables inline script executions unless you permit to the evaluation functions and inline scripts by the unsafe-eval and unsafe-inline keywords.
- **base-uri:**Base element is used to resolve relative URL to absolute one. By using this CSP directive, you can define all possible URLs which could be assigned to base-href attribute of the document.
- **frame-ancestors**: It is very similar to X-Frame-Options HTTP header. It defines the URLs by which the page can be loaded in an iframe.
- frame-src / child-src: frame-src is the deprecated version of child-src. Both define the sources that can be loaded by iframe in the page. (Please note that frame-src was brought back in CSP 3)
- object-src: Defines the resources that can be loaded by embedding such as Flash files, Java Applets.
- **img-src**: As its name implies, it defines the resources where the images can be loaded from.
- connect-src: Defines the whitelisted targets for XMLHttpRequest and WebSocket objects.
- **default-src**: It is a fallback for the directives that mostly ends with -src suffix. When the directives below are not defined, the value set to default-src will be used instead:
 - o child-src
 - o connect-src
 - o font-src
 - o img-src
 - o manifest-src
 - o media-src
 - o object-src
 - o script-src
 - style-src

When setting the CSP directives, you can also use some CSP keywords:

- none: Denies loading resources from anywhere.
- self: Points to the document's URL (domain + port).
- **unsafe-inline**: Permits running inline scripts.
- unsafe-eval: Permits execution of evaluation functions such as eval().

In addition to CSP keywords, you can also use wildcard or only a scheme when defining whitelist URLs for the points. Wildcard can be used for subdomain and port portions of the URLs:

```
Content-Security-Policy: script-src <a href="https://*.example.com">https://*.example.com</a>;
Content-Security-Policy: script-src <a href="https://example.com">https://example.com</a>;
Content-Security-Policy: script-src <a href="https://example.com">https://example.com</a>;
```

It is also possible to set a CSP in Report-Only mode instead of forcing it immediately in the migration period. Thus you can see the violations of the CSP policy in the current state of your web site while migrating to CSP:

Content-Security-Policy-Report-Only: script-src 'self'; report-uri: https://example.com;

Impact

There is no direct impact of not implementing CSP on your website. However, if your website is vulnerable to a Cross-site Scripting attack CSP can prevent successful exploitation of that vulnerability. By not implementing CSP you'll be missing out this extra layer of security.

Vulnerabilities

8.1. https://heybuddy.cf/

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate
Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1399.9188 Total Bytes Received: 13129 Body Length: 12198 Is Compressed: No

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Actions to Take

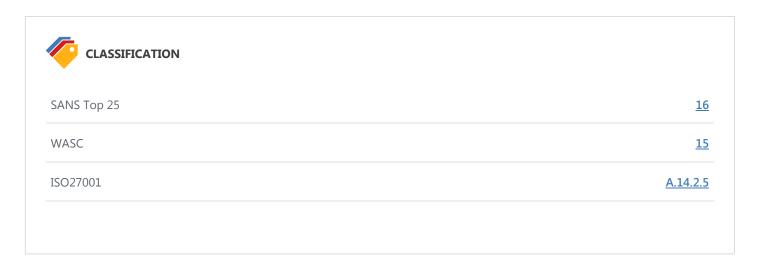
- Enable CSP on your website by sending the Content-Security-Policyin HTTP response headers that instruct the browser to apply the policies you specified.
- Apply the whitelist and policies as strict as possible.
- Rescan your application to see if Netsparker identifies any weaknesses in your policies.

Remedy

Enable CSP on your website by sending the Content-Security-Policyin HTTP response headers that instruct the browser to apply the policies you specified.

External References

- An Introduction to Content Security Policy
- Content Security Policy (CSP) HTTP Header
- Content Security Policy (CSP)



9. Expect-CT Not Enabled

BEST PRACTICE 🖞 1

Netsparker identified that Expect-CT is not enabled.

Certificate Transparency is a technology that makes impossible (or at least very difficult) for a CA to issue an SSL certificate for a domain without the certificate being visible to the owner of that domain.

Google announced that, starting with April 2018, if it runs into a certificate that is not seen in Certificate Transparency (CT) Log, it will consider that certificate invalid and reject the connection. Thus sites should serve certificate that takes place in CT Logs. While handshaking, sites should serve a valid Signed Certificate Timestamp (SCT) along with the certificate itself.

Expect-CT can also be used for detecting the compatibility of the certificates that are issued before the April 2018 deadline. For instance, a certificate that was signed before April 2018, for 10 years it will be still posing a risk and can be ignored by the certificate transparency policy of the browser. By setting Expect-CT header, you can prevent misissused certificates to be used.

Vulnerabilities

9.1. https://heybuddy.cf/cdn-cgi/styles/cf.errors.css

Certainty

Request

GET /cdn-cgi/styles/cf.errors.css HTTP/1.1

Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/appg,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

Cookie: cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; cf chl rc i=9; cf chl prog=a16

Referer: https://heybuddy.cf/

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1999.2952 Total Bytes Received: 24154 Body Length: 23688 Is Compressed: No

HTTP/1.1 200 OK

cf-request-id: 05c268605c0000048f9420f200000001

Server: cloudflare

CF-RAY: 5e174346fc30048f-CDG

Expires: Tue, 13 Oct 2020 09:14:16 GMT

Connection: keep-alive X-Frame-Options: SAMEORIGIN

Last-Modified: Mon, 12 Oct 2020 17:39:39 GMT

Vary: Accept-Encoding Content-Type: text/css Transfer-Encoding: chunked

Content-Encoding:

Date: Tue, 13 Oct 2020 07:14:16 GMT

ETag: W/"5f8494db-5c88"

Cache-Control: max-age=7200

Cache-Control: public

#cf-wrapper a,#cf-wrapper abbr,#cf-wrapper article,#cf-wrapper aside,#cf-wrapper b,#cf-wrapper big,#cf-wrapper blockquote,#cf-wrapper body,#cf-wrapper canvas,#cf-wrapper caption,#cf-wrapper center,#cf-wrapper cite,#cf-wrapper code,#cf-wrapper dd,#cf-wrapper del,#cf-wrapper details,#cf-wrapper dfn,#cf-wrapper div,#cf-wrapper dl,#cf-wrapper dt,#cf-wrapper embed,#cf-wrapper fieldset,#cf-wrapper fi gcaption,#cf-wrapper figure,#cf-wrapper footer,#cf-wrapper form,#cf-wrapper h1,#cf-wrapper h2,#cf-wrapper h3,#cf-wrapper h4,#cf-wrapper h5,#cf-wrapper h6,#cf-wrapper header,#cf-wrapper hgroup,#cf-wrapper ht m1,#cf-wrapper iframe,#cf-wrapper img,#cf-wrapper label,#cf-wrapper legend,#cf-wrapper li,#cf-wrapper mark,#cf-wrapper menu,#cf-wrapper nav,#cf-wrapper object,#cf-wrapper ol,#cf-wrapper output t,#cf-wrapper pr,#cf-wrapper strike,#cf-wrapper samp,#cf-wrapper sub,#cf-wrapper summary,#cf-wrapper sup,#cf-wrapper table,#cf-wrapper tbody,#cf-wrapper td,#cf-wrapper tfoot,#cf-wrapper th,#cf-wrapper theaded,#cf-wrapper tt,#cf-wrapper ul{margin:0;padding:0;border:0;font:inherit;font-size:100%;text-decoration:none;vertical-align:baseline}#cf-wrapper a img{border:none}#cf-wrapper footer,#cf-wrapper figure,#cf-wrapper footer,#cf-wrapper figure,#cf-wrapper footer,#cf-wrapper header,#cf-wrapper header,#cf-wrapper figure,#cf-wrapper footer,#cf-wrapper header,#cf-wrapper header,#cf-

Remedy

Configure your web server to respond with Expect-CT header.

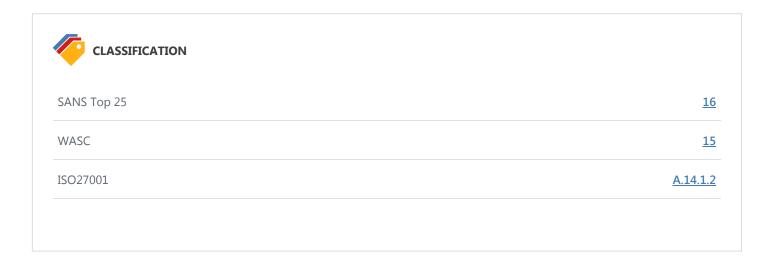
Expect-CT: enforce, max-age=7776000, report-uri="https://ABSOLUTE_REPORT_URL"

Note: We strongly suggest you to use Expect-CT header in **report-only mode**first. If everything goes well and your certificate is ready, go with the Expect-CT enforcemode. To use **report-only mode**first, omit **enforce**flag and see the browser's behavior with your

Expect-CT: max-age=7776000, report-uri="https://ABSOLUTE_REPORT_URL"

External References

- Expect-CT Extension for HTTP
- Expect-CT HTTP Header
- Expect-CT Header



10. Missing X-XSS-Protection Header

BEST PRACTICE 🖞 1

Netsparker detected a missing X-XSS-Protectionheader which means that this website could be at risk of a Cross-site Scripting (XSS) attacks.

Impact

This issue is reported as additional information only. There is no direct impact arising from this issue.

Vulnerabilities

10.1. https://heybuddy.cf/

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate
Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

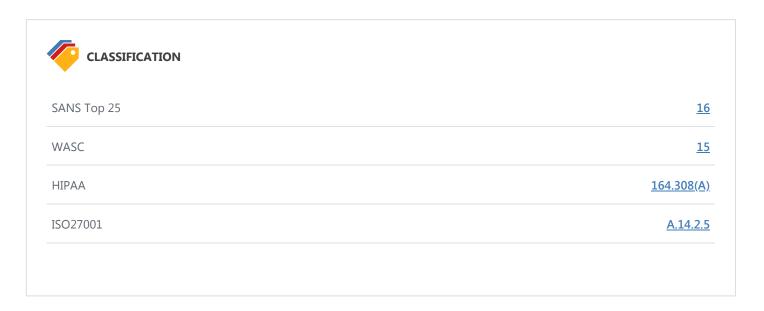
```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Remedy

Add the X-XSS-Protection header with a value of "1; mode= block".

X-XSS-Protection: 1; mode=block

- Internet Explorer 8 Security Features MSDN
- X-XSS-Protection HTTP Header
- Internet Explorer 8 XSS Filter



11. Referrer-Policy Not Implemented

BEST PRACTICE 🖞 1

Netsparker detected that no Referrer-Policy header implemented.

Referrer-Policy is a security header designed to prevent cross-domain Referer leakage.

Impact

Referer header is a request header that indicates the site which the traffic originated from. If there is no adequate prevention in place, the URL itself, and even sensitive information contained in the URL will be leaked to the cross-site.

The lack of Referrer-Policy header might affect privacy of the users and site's itself

Vulnerabilities

11.1. https://heybuddy.cf/

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Actions to Take

In a response header:

```
Referrer-Policy: no-referrer | same-origin | origin | strict-origin | no-origin-when-downgrading
```

In a META tag

```
<meta name="Referrer-Policy" value="no-referrer | same-origin"/>
```

In an element attribute

```
<a href="http://crosssite.example.com" rel="noreferrer"></a>
```

or

```
<a href="http://crosssite.example.com" referrerpolicy="no-referrer | same-origin | origin | strict-
origin | no-origin-when-downgrading"></a>
```

Remedy

Please implement a Referrer-Policy by using the Referrer-Policy response header or by declaring it in the meta tags. It's also possible to control referrer information over an HTML-element by using the rel attribute.

- Referrer Policy
- Referrer Policy MDN
- Referrer Policy HTTP Header
- A New Security Header: Referrer Policy
- Can I Use Referrer-Policy

CLASSIFICATION OWASP 2013 A6 OWASP 2017 A3 SANS Top 25 200 ISO27001 A14.2.5

12. SameSite Cookie Not Implemented

BEST PRACTICE 🖞 1

Cookies are typically sent to third parties in cross origin requests. This can be abused to do CSRF attacks. Recently a new cookie attribute named *SameSite*was proposed to disable third-party usage for some cookies, to prevent CSRF attacks.

Same-site cookies allow servers to mitigate the risk of CSRF and information leakage attacks by asserting that a particular cookie should only be sent with requests initiated from the same registrable domain.

Vulnerabilities

12.1. https://heybuddy.cf/

Identified Cookie(s)

- cf_chl_1
- cf_chl_prog
- cf_chl_rc_i

Cookie Source

JavaScript

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate
Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Remedy

The server can set a same-site cookie by adding the SameSite=...attribute to the Set-Cookieheader. There are three possible values for the SameSiteattribute:

• Lax:In this mode, the cookie will only be sent with a top-level get request.

Set-Cookie: key=value; SameSite=Lax

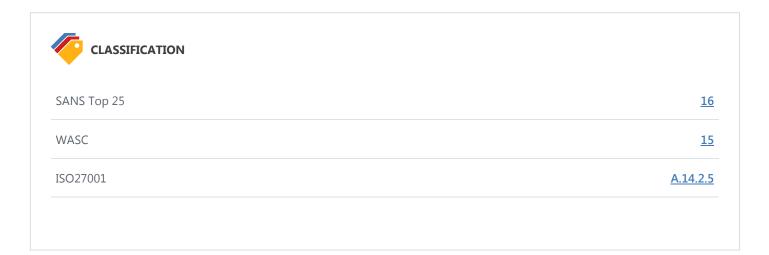
• Strict: In this mode, the cookie will not be sent with any cross-site usage even if the user follows a link to another website.

Set-Cookie: key=value; SameSite=Strict

None: In this mode, the cookie will be sent with the cross-site requests. Cookies with SameSite=Nonemust also specify the
Secureattribute to transfer them via a secure context. Setting a SameSite=Nonecookie without the Secureattribute will be
rejected by the browsers.

Set-Cookie: key=value; SameSite=None; Secure

- Security Cookies SameSite Attribute Netsparker
- Using the Same-Site Cookies Attribute to Prevent CSRF Attacks
- Same-site Cookies
- Preventing CSRF with the same-site cookie attribute
- SameSite cookies explained
- Get Ready for New SameSite=None; Secure Cookie Settings



13. Expect-CT in Report Only Mode

INFORMATION (i) 1

Netsparker identified that Expect-CT is in **report only mode**. The optional **enforce**directive controls whether the browser should drop the connection when the policy is violated.

Impact

When Expect-CT policy is deployed in **report only mode** and the user agent does not receive a valid Certificate Transparency Log, rather than dropping the connection it will simply send a report to the specified endpoint which is set with **report-uri**directive.

Vulnerabilities

13.1. https://heybuddy.cf/

Certainty

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

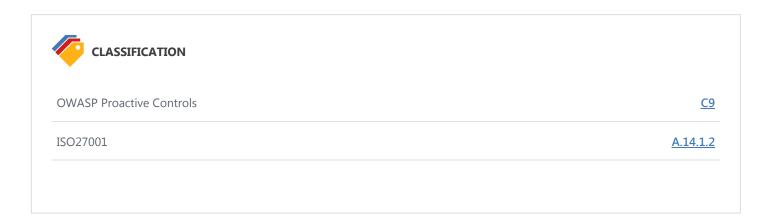
```
HTTP/1.1 403 Forbidden
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
CF-RAY: 5e17422bbd3a3329-CDG
cf-request-id: 05c267af5600003329de348200000001
Transfer-Encoding: chunked
Server: cloudflare
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321
1"}], "group": "cf-nel", "max_age":604800}
CF-Chl-Bypass: 1
Connection: close
Expires: Thu, 01 Jan 1970 00:00:01 GMT
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT;
 path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure
Content-Type: text/html; charset=UTF-8
NEL: {"report_to":"cf-nel","max_age":604800}
Date: Tue, 13 Oct 2020 07:13:31 GMT
Content-Encoding:
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
                <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<
```

Remedy

Use enforce flag in definition of Expect-CT.

Expect-CT: enforce, max-age=7776000, report-uri="https://ABSOLUTE_REPORT_URL"

- Expect-CT Extension for HTTP
- Expect-CT HTTP Header
- Expect-CT Header



14. Forbidden Resource



Netsparker identified a forbidden resource.

Access to this resource has been denied by the web server. This is generally not a security issue, and is reported here for informational purposes.

Impact

This issue is reported as additional information only. There is no direct impact arising from this issue.

Vulnerabilities

14.1. https://heybuddy.cf/

CONFIRMED

Request

GET / HTTP/1.1
Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

Response Time (ms): 1399.9188 Total Bytes Received: 13129 Body Length: 12198 Is Compressed: No

HTTP/1.1 403 Forbidden Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct" Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0 CF-RAY: 5e17422bbd3a3329-CDG cf-request-id: 05c267af5600003329de348200000001 Transfer-Encoding: chunked Server: cloudflare Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257321 1"}], "group": "cf-nel", "max_age":604800} CF-Chl-Bypass: 1 Connection: close Expires: Thu, 01 Jan 1970 00:00:01 GMT X-Frame-Options: SAMEORIGIN Vary: Accept-Encoding Set-Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; expires=Thu, 12-Nov-20 07:13:31 GMT; path=/; domain=.heybuddy.cf; HttpOnly; SameSite=Lax; Secure Content-Type: text/html; charset=UTF-8 NEL: {"report_to":"cf-nel","max_age":604800} Date: Tue, 13 Oct 2020 07:13:31 GHTTP/1.1 403 Forbidden Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct" Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0



OWASP Proactive Controls

ISO27001 <u>A.8.1.1</u>

15. Web Application Firewall Detected



Netsparker detected that the target website is using a Web Application Firewall (WAF).

Impact

This issue is reported as additional information only. There is no direct impact arising from this issue.

Vulnerabilities

15.1. https://heybuddy.cf/%3Cscript%3Ealert(0)%3C/script%3E

Method	Parameter	Value
GET	URI-BASED	<script>alert(0)</script>

WAF Name

• Cloudflare

Certainty

Request

GET /%3Cscript%3Ealert(0)%3C/script%3E HTTP/1.1

Host: heybuddy.cf

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Accept-Encoding: gzip, deflate
Accept-Language: en-us,en;q=0.5

Cache-Control: no-cache

Cookie: __cfduid=d24f5fe1adf7901d3df9a127e65c2de201602573211; cf_chl_rc_i=9; cf_chl_prog=a16

User-Agent: Mozilla/5.0 (Windows NT 10.0; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.

```
HTTP/1.1 403 Forbidden
cf-request-id: 05c2685be90000edffd01fd200000001
Expires: Thu, 01 Jan 1970 00:00:01 GMT
CF-RAY: 5e17433fdc31edff-CDG
CF-Chl-Bypass: 1
Connection: close
Report-To: {"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report?lkg-colo=19&lkg-time=160257325
6"}], "group": "cf-nel", "max_age":604800}
Server: cloudflare
NEL: {"report to":"cf-nel", "max age":604800}
X-Frame-Options: SAMEORIGIN
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Content-Type: text/html; charset=UTF-8
Transfer-Encoding: chunked
Content-Encoding:
Date: Tue, 13 Oct 2020 07:14:15 GMT
Cache-Control: private, max-age=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0
Vary: Accept-Encoding
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
                 <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>
<!--[if IE 8]>
                  <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<title>Attention Required! | Cloudflare</title>
<meta name="captcha-bypass" id="captcha-bypass" />
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
<meta name="robots" content="noindex, nofollow" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<link rel="stylesheet" id="cf_styles-css" href="/cdn-cgi/styles/cf.errors.css" type="text/css" media="s</pre>
creen,projection" />
<!--[if lt IE 9]><link rel="stylesheet" id='cf_styles-ie-css' href="/cdn-cgi/styles/cf.errors.ie.css" t
ype="text/css" media="screen,projection" /><![endif]-->
<style type="text/css">body{margin:0;padding:0}</style>
<!--[if gte IE 10]><!-->
<script>
if (!navigator.cookieEnabled) {
window.addEventListener('DOMContentLoaded', function () {
var cookieEl = document.getElementById('cookie-alert')
```



OWASP Proactive Controls <u>C7</u>

ISO27001 A.18.1.3

Show Scan Detail ⊙

Enabled Security Checks

: Apache Struts S2-045 RCE,

Apache Struts S2-046 RCE,

BREACH Attack,

Code Evaluation,

Code Evaluation (Out of Band),

Command Injection,

Command Injection (Blind), Content Security Policy,

Content-Type Sniffing,

Cookie,

Cross Frame Options Security,

Cross-Origin Resource Sharing (CORS),

Cross-Site Request Forgery,

Cross-site Scripting,

Cross-site Scripting (Blind),

Custom Script Checks (Active),

Custom Script Checks (Passive),

Custom Script Checks (Per Directory),

Custom Script Checks (Singular),

Drupal Remote Code Execution,

Expect Certificate Transparency (Expect-CT),

Expression Language Injection,

File Upload,

Header Analyzer,

Heartbleed,

HSTS,

HTML Content,

HTTP Header Injection,

HTTP Methods,

HTTP Status,

HTTP.sys (CVE-2015-1635),

IFrame Security,

Insecure JSONP Endpoint, Insecure Reflected Content, JavaScript Libraries, Local File Inclusion, Login Page Identifier, Mixed Content, Open Redirection, Referrer Policy, Reflected File Download, Remote File Inclusion, Remote File Inclusion (Out of Band), Reverse Proxy Detection, RoR Code Execution, Server-Side Request Forgery (DNS), Server-Side Request Forgery (Pattern Based), Server-Side Template Injection, Signatures, SQL Injection (Blind), SQL Injection (Boolean), SQL Injection (Error Based), SQL Injection (Out of Band), SSL, Static Resources (All Paths), Static Resources (Only Root Path), Unicode Transformation (Best-Fit Mapping), WAF Identifier, Web App Fingerprint, Web Cache Deception, WebDAV, Windows Short Filename, XML External Entity, XML External Entity (Out of Band) **URL Rewrite Mode** : Heuristic **Detected URL Rewrite Rule(s)** : None **Excluded URL Patterns** : $(log|sign)\-?(out|off)$ exit endsession gtm\.js WebResource\.axd ScriptResource\.axd **Authentication** : None **Scheduled** : No Additional Website(s) : None

This report created with 5.8.1.28119-master-bca4e4e https://www.netsparker.com