

HK2

CSP (Content Security Policy)

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16th June, 2022

Introduction

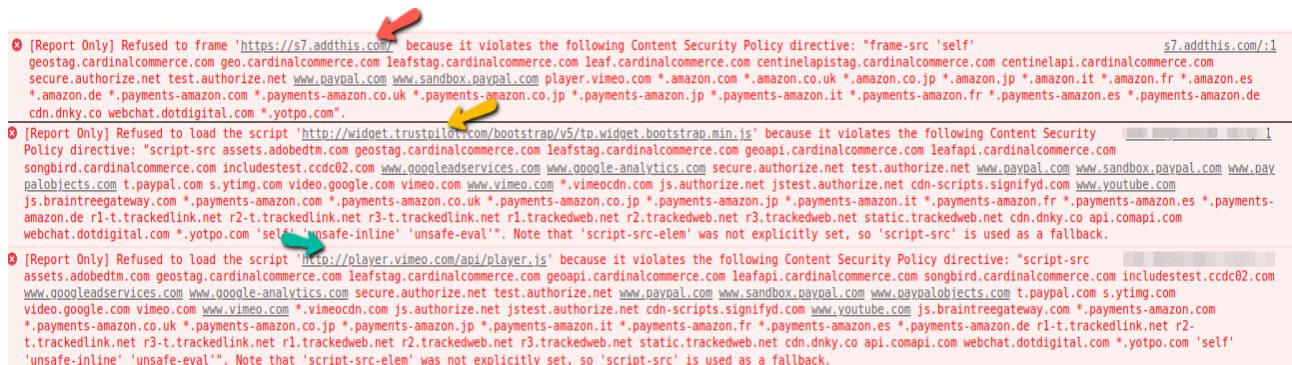
This Module **HK2 CSP Whitelisting** is for Magento version 2.3.5 or above & can whitelist some of the major urls like *Cloudflare, Google Analytics, Google Fonts, Fontawesome, Addthis, Googleapis, Facebook Graph, Pinterest, Vimeo, Twitter, Trust Pilot.*

One can disable Magento 2 CSP. However, Disabling results in more possibilities of attacks on the Magento store. (CSP) are a powerful tool to mitigate against **Cross Site Scripting (XSS)** and related attacks.

When does this type of error occur?

- If you have added any external JS Script Link in your theme/module.
- If you added an external Stylesheet Link in your theme/module.
- If you added an external Iframe in your theme/module.

If you face these types of CSP Errors or the error mentioned in the screenshot?



Errors Like :-

- **Refused to Frame** <https://demosite.com>
- **Refused to Load the Script** <https://demosite.com>
- **Etc, CSP Policy Issues**
- **Violate Content Security Policy Directive**

The above errors can be sorted out by using this module. But don't forget to check whether the problematic url is listed below on the Whitelist URLs Section. If not, Please Check the **Section - How Does The Extension Work** else this module won't work in your case. This Module does not disable the CSP Policy, rather it whitelists some of the common urls which are mentioned below.



Installation Guide

1. **Setup** :- Extract the zip folder in app/code
2. **Run** :- `php bin/magento module:enable HK2_Csp`
3. **Run** :- `php bin/magento setup:upgrade` from your magento directory

Once Installed, You can check in **Magento Frontend - Browser Console**, Whether you are facing any more CSP Policy Issues.

Note:- Please check the URLs which are whitelisted below. This Module does not disable the CSP Policy, rather it whitelists some of the common urls which are mentioned below.

How Does The Extension Work?

You can add a domain to the whitelist for a policy (like script-src, style-src, font-src and others) by updating the `csp_whitelist.xml` present in `/app/code/HK2/Csp/etc/csp_whitelist.xml`. Please only create rules for URLs that you have verified as safe & safe for your Magento Store. Ensure that you use a unique "id" (e.g. the URL) for each entry within its group.

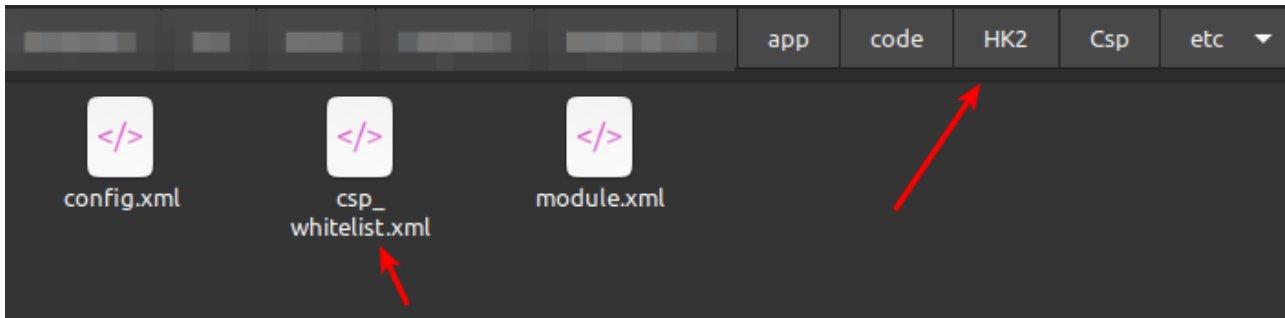
Below screenshot describes Policy Name & Description.

POLICY NAME	DESCRIPTION
<code>default-src</code>	The default policy.
<code>base-uri</code>	Defines which URLs can appear in a page's <code><base></code> element.
<code>child-src</code>	Defines the sources for workers and embedded frame contents.
<code>connect-src</code>	Defines the sources that can be loaded using script interfaces.
<code>font-src</code>	Defines which sources can serve fonts.
<code>form-action</code>	Defines valid endpoints for submission from <code><form></code> tags.
<code>frame-ancestors</code>	Defines the sources that can embed the current page.
<code>frame-src</code>	Defines the sources for elements such as <code><frame></code> and <code><iframe></code> .
<code>img-src</code>	Defines the sources from which images can be loaded.
<code>manifest-src</code>	Defines the allowable contents of web app manifests.
<code>media-src</code>	Defines the sources from which images can be loaded.
<code>object-src</code>	Defines the sources for the <code><object></code> , <code><embed></code> , and <code><applet></code> elements.
<code>script-src</code>	Defines the sources for JavaScript <code><script></code> elements.
<code>style-src</code>	Defines the sources for stylesheets.

How to add your own URL for Whitelisting in CSP?

1. How to add your own URL for Whitelisting? -

Step-1 Open `<magento_root>app/code/HK2/Csp/etc/csp_whitelist.xml` from your editor.




2. Now you have to add the url which you want to be whitelisted. Add the URL in the specific Policy, else it won't work. For Example:- Add your script url to be whitelisted in **script-src** & Stylesheet Src in **style-src**. For complete policy list you can visit this link :-
<https://developer.adobe.com/commerce/php/development/security/content-security-policies/#configure-csps-for-your-custom-codeextensiontheme>
3. Once done, Save the file and Clean the Cache from Admin - System - Tools - Cache Management

A screenshot of the 'Cache Management' page in the Magento Admin interface. The page has a sidebar on the left with various navigation options. At the top right, there are search, notification, and user icons. Below the header, there are two buttons: 'Flush Cache Storage' and 'Flush Magento Cache'. A red arrow points to the 'Flush Magento Cache' button. Below the buttons, there is a table with 5 columns: 'Cache Type', 'Description', 'Tags', and 'Status'. The table contains 8 rows of cache types, all with a status of 'ENABLED'.

Cache Type	Description	Tags	Status
Configuration	Various XML configurations that were collected across modules and merged	CONFIG	ENABLED
Layouts	Layout building instructions	LAYOUT_GENERAL_CACHE_TAG	ENABLED
Blocks HTML output	Page blocks HTML	BLOCK_HTML	ENABLED
Collections Data	Collection data files	COLLECTION_DATA	ENABLED
Reflection Data	API interfaces reflection data	REFLECTION	ENABLED
Database DDL operations	Results of DDL queries, such as describing tables or indexes	DB_DDL	ENABLED
Compiled Config	Compilation configuration	COMPILED_CONFIG	ENABLED
FAV tunes and attributes	Entity tunes declaration cache	FAV	ENABLED

Once done, You can see your url has been whitelisted. In case of any error, try checking in a private tab or start from Step-1



For more information you can check the following link on how to add links to whitelist

- **How to Add Domain in Whitelisting:-**
<https://developer.adobe.com/commerce/php/development/security/content-security-policies/#add-a-domain-to-the-whitelist>
- **Complete Information on CSP:-**
<https://developer.adobe.com/commerce/php/development/security/content-security-policies>
- **Types of CSP & Policy Name & Description:-**
<https://developer.adobe.com/commerce/php/development/security/content-security-policies/#configure-csps-for-your-custom-codeextensiontheme>

Screenshot of the `app/code/HK2/Csp/etc/csp_whitelist.xml`. Where you can add your whitelist urls.

```
1 <?xml version="1.0"?>
2 <!--
3 /**
4  * @Info      Whitelisting CSP
5  * @author    Basant Mandal - HK2
6  * @copyright  Copyright (c) 2022 Basant Mandal - HK2
7  * @package   HK2_Csp
8  * @version   1.0.0
9  */
10 -->
11 <csp_whitelist xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="urn:magento:module:Magento_Csp/etc/csp_whitelist.xsd">
12     <policies>
13         <policy id="script-src">
14             <values>
15                 <value id="addthis.com" type="host">*.addthis.com</value>
16                 <value id="ajax.googleapis" type="host">*.googleapis.com</value>
17                 <value id="cloudflare" type="host">*.cloudflare.com</value>
18                 <value id="fontawesome" type="host">*.fontawesome.com</value>
19                 <value id="google" type="host">*.google.com</value>
20                 <value id="google-analytics" type="host">*.google-analytics.com</value>
21                 <value id="google-tagmanager.com" type="host">google-tagmanager.com</value>
22                 <value id="graph-facebook" type="host">graph.facebook.com</value>
23                 <value id="gstatic" type="host">*.gstatic.com</value>
24                 <value id="addthis.moatads.com" type="host">*.moatads.com</value>
25                 <value id="trustpilot" type="host">*.trustpilot.com</value>
26                 <value id="vimeo" type="host">*.vimeo.com</value>
27                 <value id="widgets-pinterest" type="host">widgets.pinterest.com</value>
28             </values>
29         </policy>
30         <policy id="style-src">
31             <values>
32                 <value id="cloudflare" type="host">*.cloudflare.com</value>
33                 <value id="fontawesome" type="host">*.fontawesome.com</value>
34                 <value id="googleapis" type="host">*.googleapis.com</value>
35                 <value id="gstatic" type="host">*.gstatic.com</value>
36                 <value id="twitter.com" type="host">*.twitter.com</value>
37             </values>
38         </policy>
39         <policy id="img-src">
40             <values>
41                 <value id="cloudflare" type="host">*.cloudflare.com</value>
42                 <value id="data" type="host">data:</value>
43                 <value id="google-analytics" type="host">*.google-analytics.com</value>
44                 <value id="paypal" type="host">*.paypal.com</value>
45                 <value id="twitter.com" type="host">*.twitter.com</value>
46                 <value id="vimeocdn" type="host">*.vimeocdn.com</value>
47             </values>
48         </policy>
49         <policy id="connect-src">
50             <values>
51                 <value id="cloudflare" type="host">*.cloudflare.com</value>
52                 <value id="paypal" type="host">*.paypal.com</value>
53                 <value id="twitter.com" type="host">*.twitter.com</value>
54             </values>
55         </policy>
56         <policy id="font-src">
57             <values>
58                 <value id="cloudflare" type="host">*.cloudflare.com</value>
59                 <value id="fontawesome" type="host">*.fontawesome.com</value>
60                 <value id="fontawesomecdn" type="host">*.bootstrapcdn.com</value>
61                 <value id="googleapis" type="host">*.googleapis.com</value>
62                 <value id="gstatic" type="host">*.gstatic.com</value>
63                 <value id="twitter.com" type="host">*.twitter.com</value>
64             </values>
65         </policy>
66         <policy id="frame-src">
67             <values>
68                 <value id="addthis.com" type="host">*.addthis.com</value>
69                 <value id="google.com" type="host">*.google.com</value>
70                 <value id="trustpilot" type="host">*.trustpilot.com</value>
71                 <value id="twitter.com" type="host">*.twitter.com</value>
72                 <value id="vimeo" type="host">*.vimeo.com</value>
73             </values>
74         </policy>
75     </policies>
76 </csp_whitelist>
```



Features

1. Fully Customizable as per your Store needs. Please read the above documentation on how to add your own URL for CSP Whitelisting.
2. Simple, 100% Open Source & Free.
3. CSP is not disabled rather specific listed urls are whitelisted, keeping your Magento Store Safe.

Scroll Down to check the complete list of the Whitelist Urls

Whitelisted Urls

Some of the Default URL Whitelisted in module HK2 CSP

- Addthis (moatads is a part of Addthis)
- Cloudflare
- Facebook Graph
- Fontawesome
- Google Analytics, Google Fonts, Gstatic, Google Tag Manager & Googleapis
- Pinterest
- Trust Pilot
- Twitter
- Vimeo

Complete List of URL Whitelisted

scripts-src whitelisted

- *.addthis.com
- *.googleapis.com
- *.cloudflare.com
- *.fontawesome.com
- *.google.com
- *.google-analytics.com
- googletagmanager.com
- graph.facebook.com
- *.gstatic.com
- *.moatads.com
- *.trustpilot.com
- *.vimeo.com
- widgets.pinterest.com

style-src whitelisted

- *.cloudflare.com
- *.fontawesome.com
- *.googleapis.com
- *.gstatic.com
- *.twitter.com



img-src whitelisted

- *.cloudflare.com
- data:
- *.google-analytics.com
- *.paypal.com
- *.twitter.com
- *.vimeocdn.com

connect-src whitelisted

- *.cloudflare.com
- *.paypal.com
- *.twitter.com

font-src whitelisted

- *.cloudflare.com
- *.fontawesome.com
- *.googleapis.com</value>
- *.gstatic.com
- *.twitter.com

frame-src whitelisted

- *.addthis.com
- *.google.com
- *.trustpilot.com
- *.twitter.com
- *.vimeo.com



In case any issue feel free to contact at :- hashtagkitto@gmail.com or you need to add some more urls

