XSS via Mathematical Typesetting in jgraph/drawio

1

Valid Reported on Sep 13th 2022

Requirements

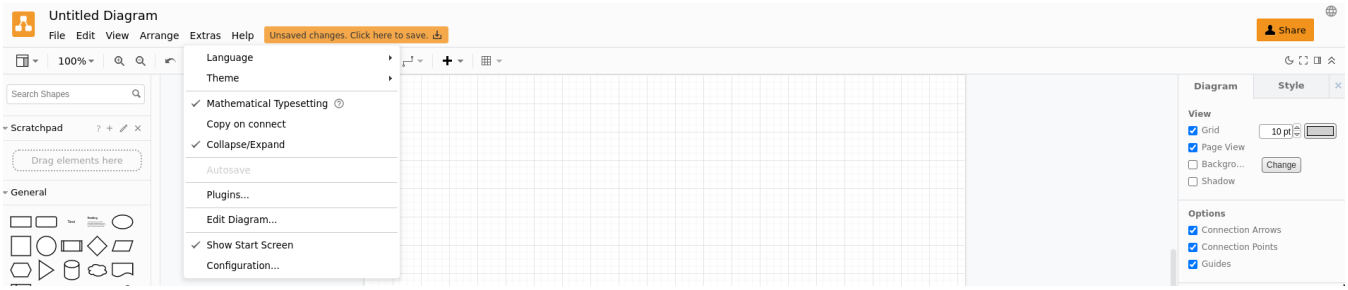
Feature: Extras > Mathematical Typesetting enabled.
User interaction: Access vulnerable page || diagram and wheel click on a link.

Description

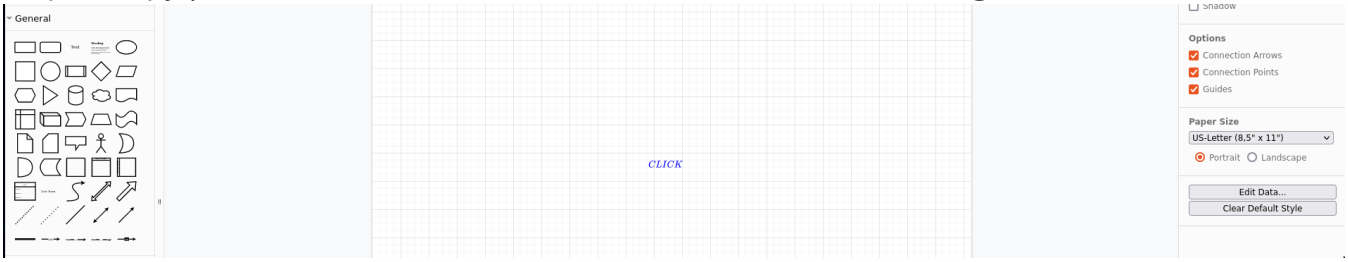
The Mathematical Typesetting feature allows to use inline content such as `AsciiMath` or `LaTeX` . Using it allows you to create `a` tag via \href macro. By default, it allows you to use dangerous wrappers like `javascript:` which permits on click XSS. (wheel click in draw.io context)

Proof of Concept

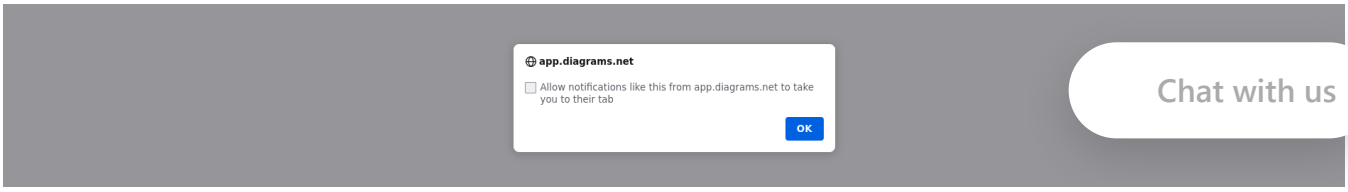
Step 1: Enable Mathematical Typesetting.



Step 2: Copy | Past `$$\href{javascript:alert()}{CLICK}$$` in the diagram.



Step 3: Wheel click on the link.



Check Requierements section if it's not working.

🛠️ Fix suggestion

Use ui/safe extension which prevents several security risks such as `javascript` wrapper in the `href` attribute.

Impact

An attacker might use it, for example, to extract information from the user's diagram.

CVE
CVE-2022-3223
(Published)

Vulnerability Type
CWE-79: Cross-site Scripting (XSS) - Stored

Severity
Medium (4.3)

Registry
Npm

Affected Version
20.2.8

Visibility
Public

Status
Fixed

Found by

Mizu
@kevin-mizu
pro

This report was seen 3,030 times.

Chat with us

We are processing your report and will contact the jgraph/drawio team within 24 hours.
2 months ago

David Benson 2 months ago Maintainer

What domain are you testing this on? What is the CSP in the response headers for that domain?

Mizu 2 months ago Researcher

I tested it on app.diagrams.net and viewer.diagrams.net. But, I got really weird issues testing it, it must be due to CSP, you are right

Mizu 2 months ago Researcher

Do you want me to take time trying to exploit it with CSP bypass or this is enough for you?

Mizu 2 months ago Researcher

As an example: PoC

Mizu modified the report 2 months ago

Mizu modified the report 2 months ago

David Benson 2 months ago Maintainer

Nothing happens on this PoC for me. What is the CSP in the reponse header for you?

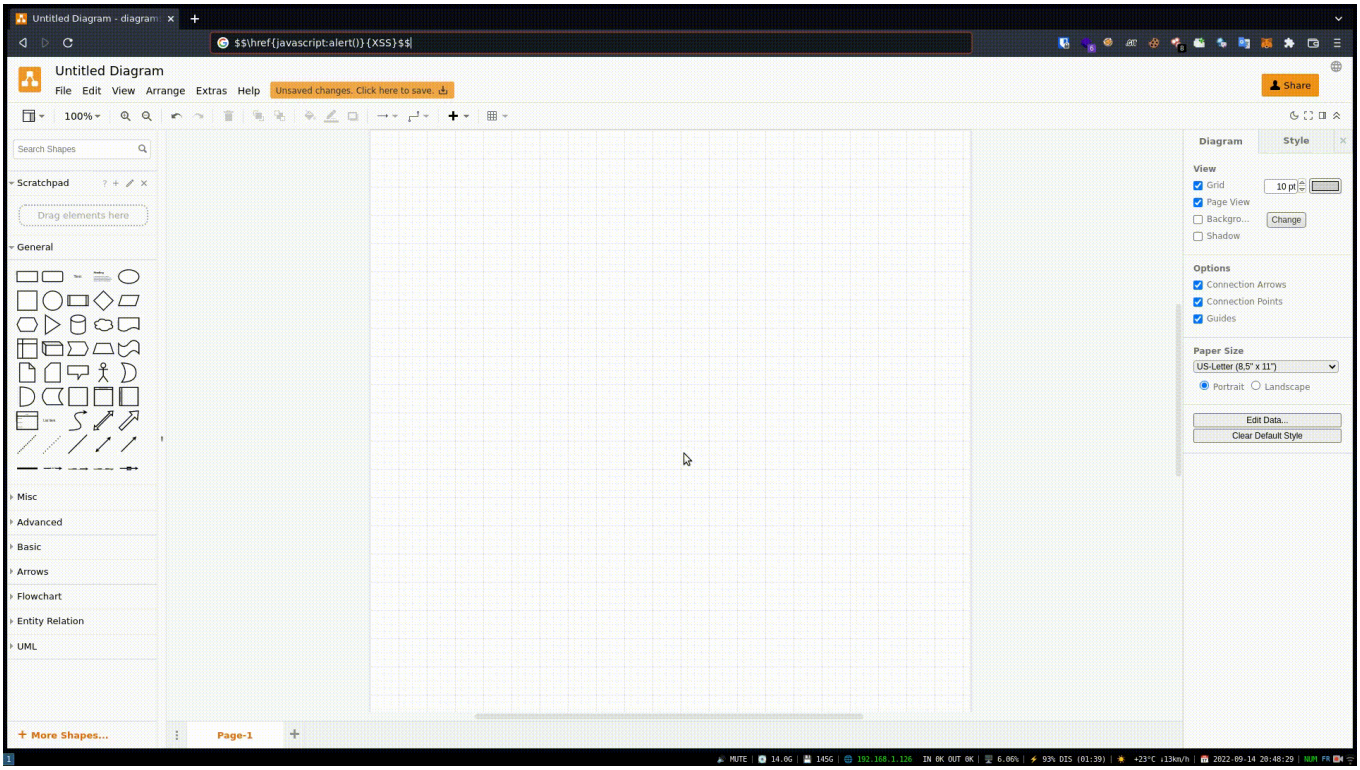
We have contacted a member of the jgraph/drawio team and are waiting to hear back
2 months ago

Mizu 2 months ago Researcher

CSP on viewer.diagrams.net:

```
connect-src *; img-src * data: blob:; media-src * data:; font-src *
```

Video:



PS: it must be a wheel click or it won't works.

Diagram: Link

The PoC doesn't work on app.diagrams.net, I probably did something weird while testing...

David Benson validated this vulnerability 2 months ago

Mizu has been awarded the disclosure bounty ✅

The fix bounty is now up for grabs

The researcher's credibility has increased: +7

David Benson marked this as fixed in **20.3.1** with commit **ea012b** 2 months ago

The fix bounty has been dropped ❌

This vulnerability will not receive a CVE ❌

Sign in to join this conversation

Chat with us