thepiyushkumarshukla / **CouchCMS-privilege-Escalation.md**

Created 2 weeks ago

Code Revisions 1

CouchCMS-privilege-Escalation.md

Vulnerability :- Privilege Escalation via Parameter Tampering in CouchCMS

A normal Admin user can able to make as many SuperAdmin users in CouchCMS, which is not in the application functionality. By doing so, that user is able to become a SuperAdmin on the application without any restriction.

Theory :

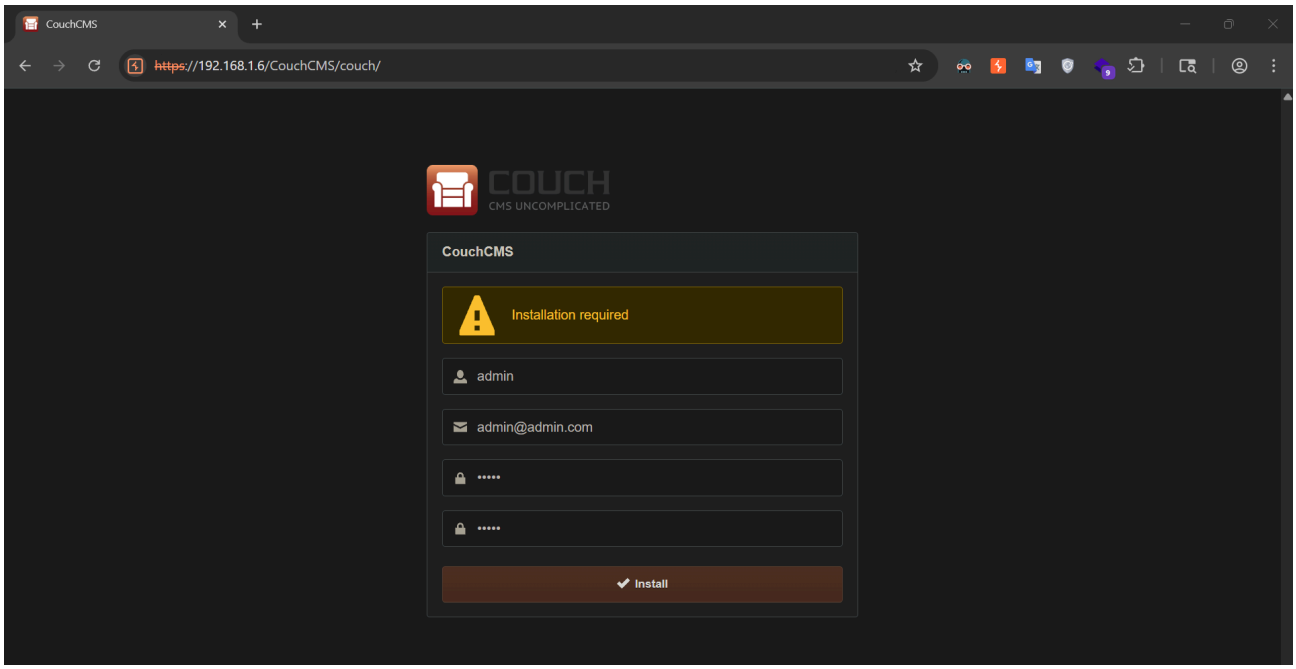
This application has mainly `4` Types of Users

1. Super Admin
2. Admin
3. Authenticated (special)
4. Only Authenticated

STEPS TO REPRODUCE

1. Open and Setup CouchCMS

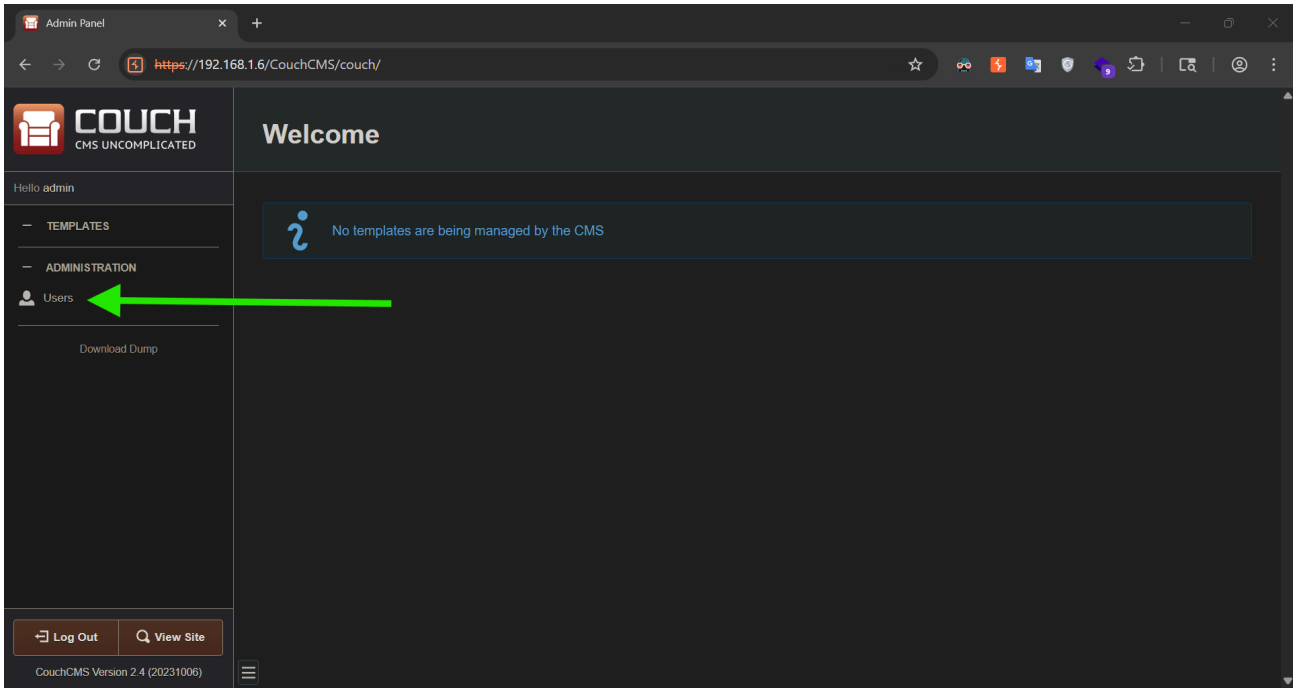
Open and setup CouchCMS in any XAMPP or LAMP server:
https://github.com/CouchCMS/CouchCMS



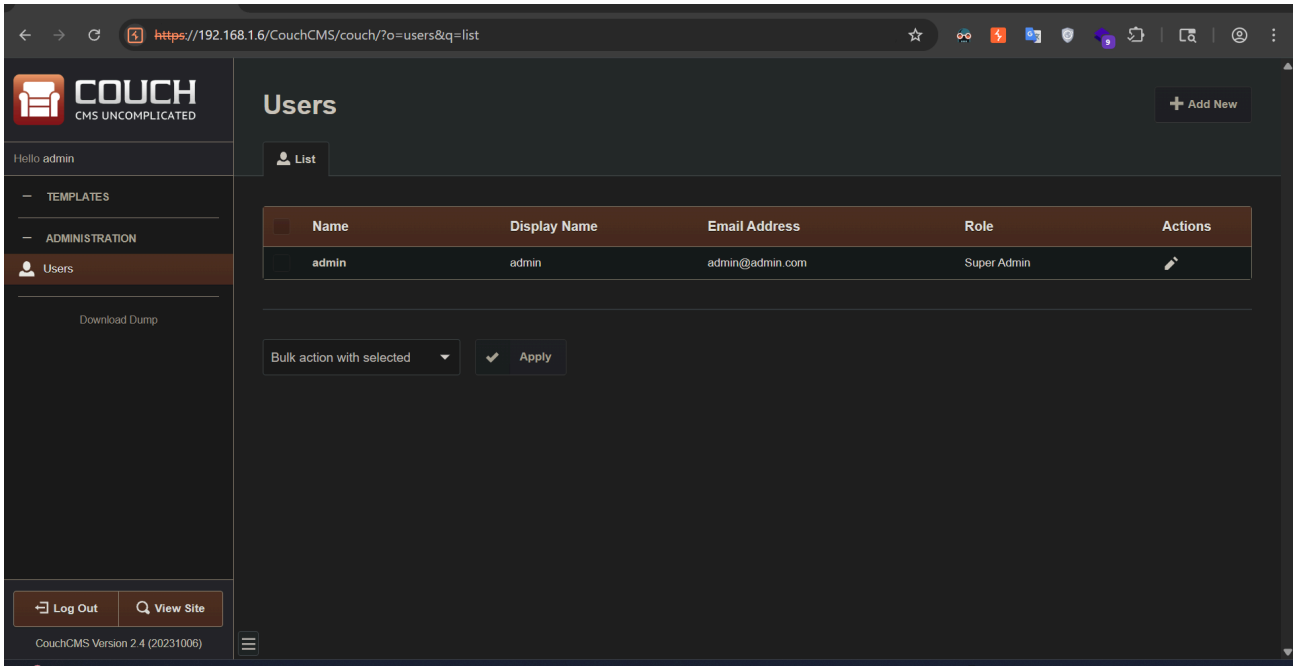
2. Login with Initial Credentials

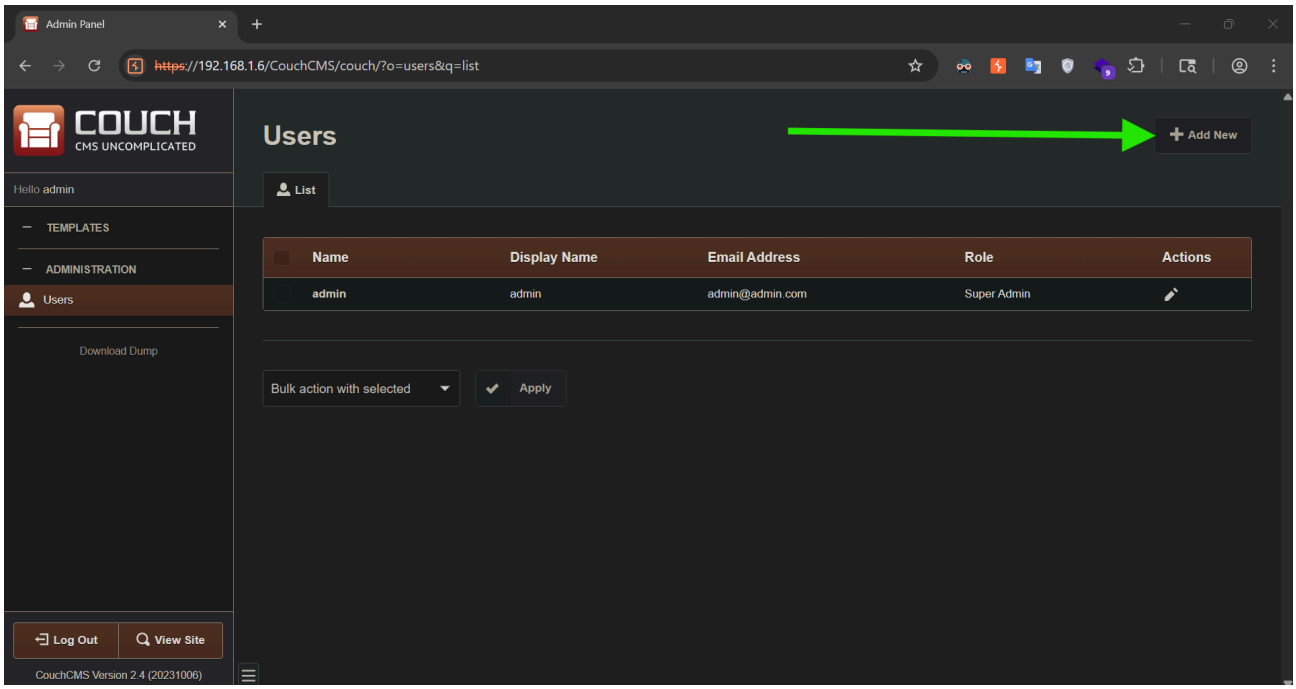
Sign in and log in with the first created credentials, which you made during the setup process.

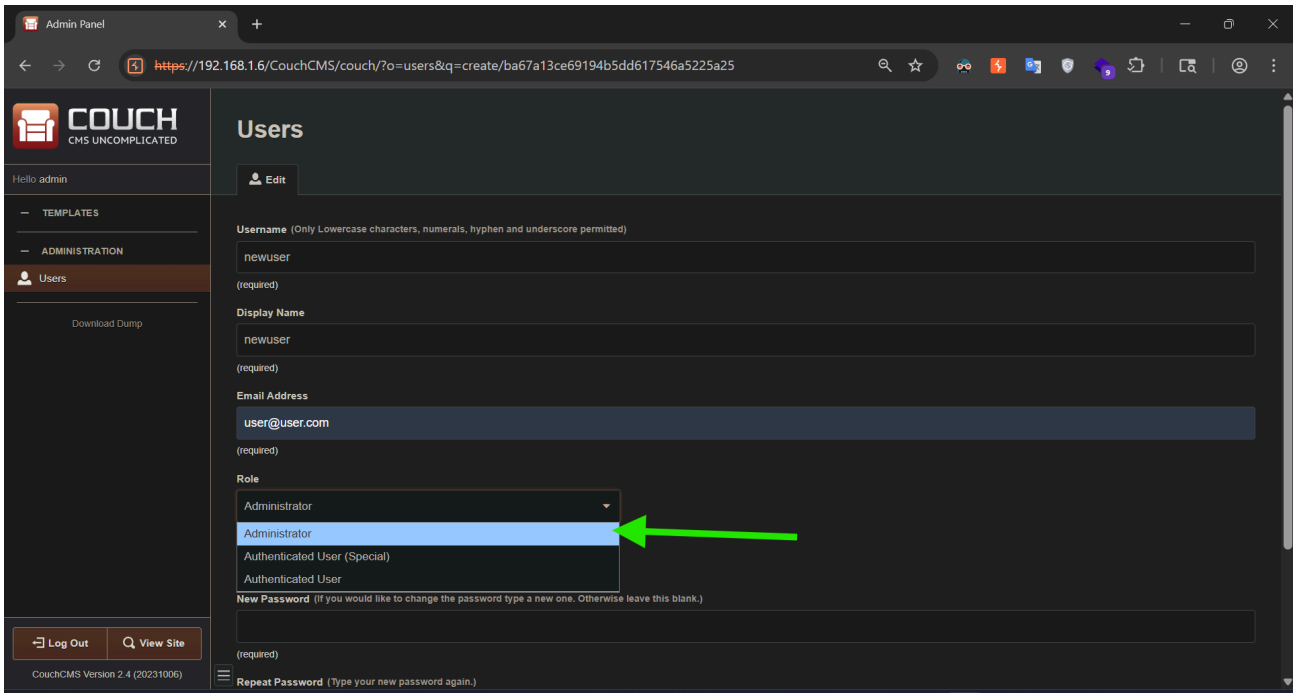
3. Navigate to the Users Section



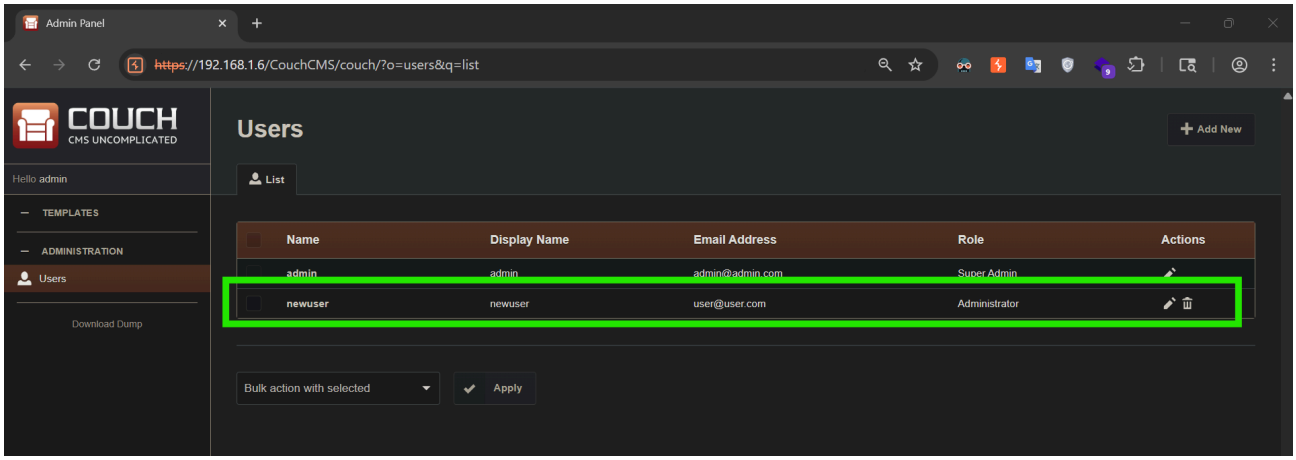
4. Add a Normal Admin User from Here



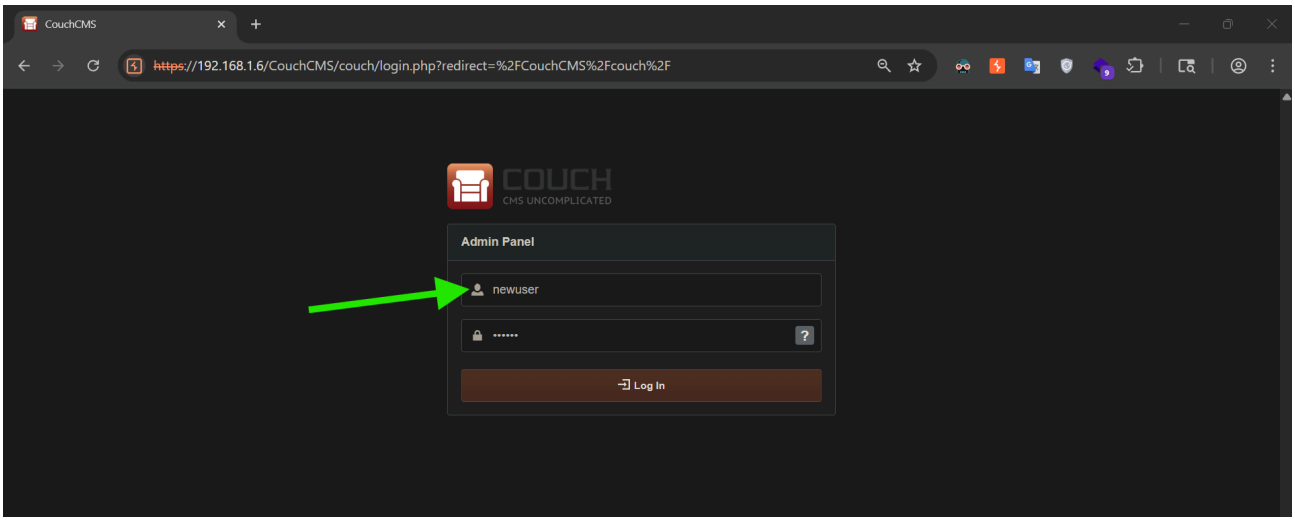




5. A Normal Admin User Added



6. Now Login as this `newuser` into the Application



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7. Expected Behavior

Now from here, no Admin user can able to add another Admin user or either Super Admin user, because the application is made in a way that only one Super Admin will be possible in the application.

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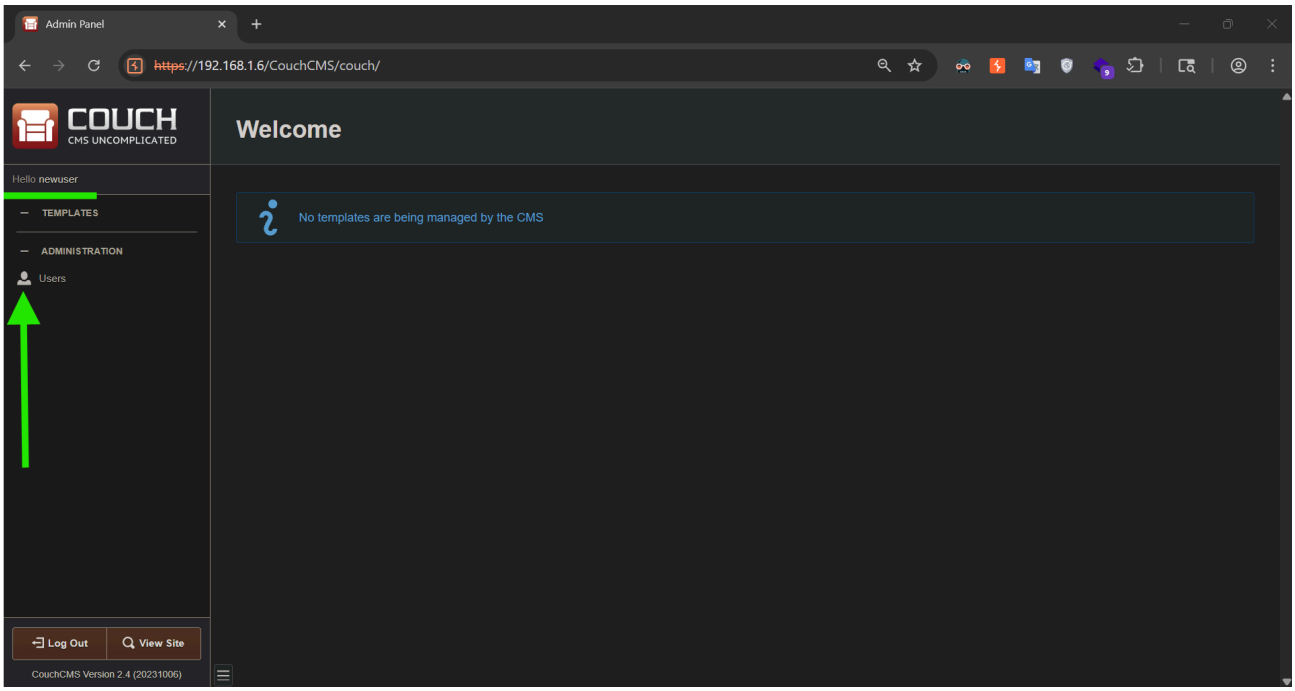
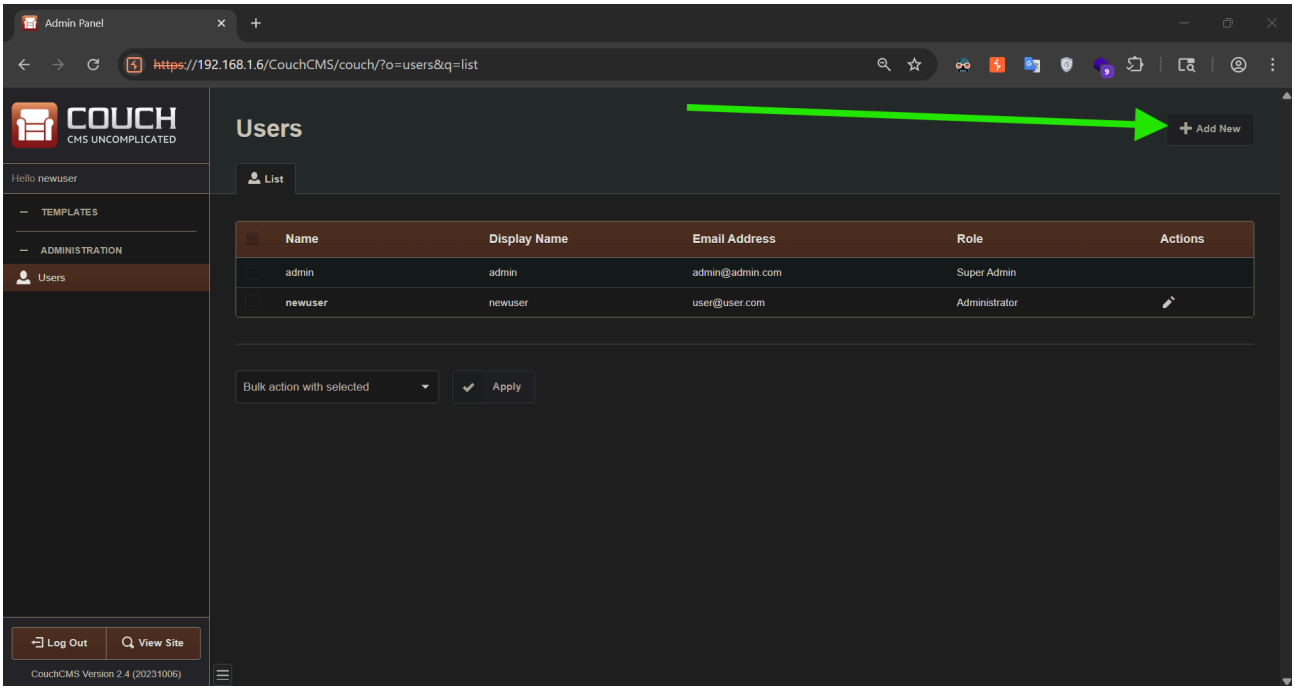
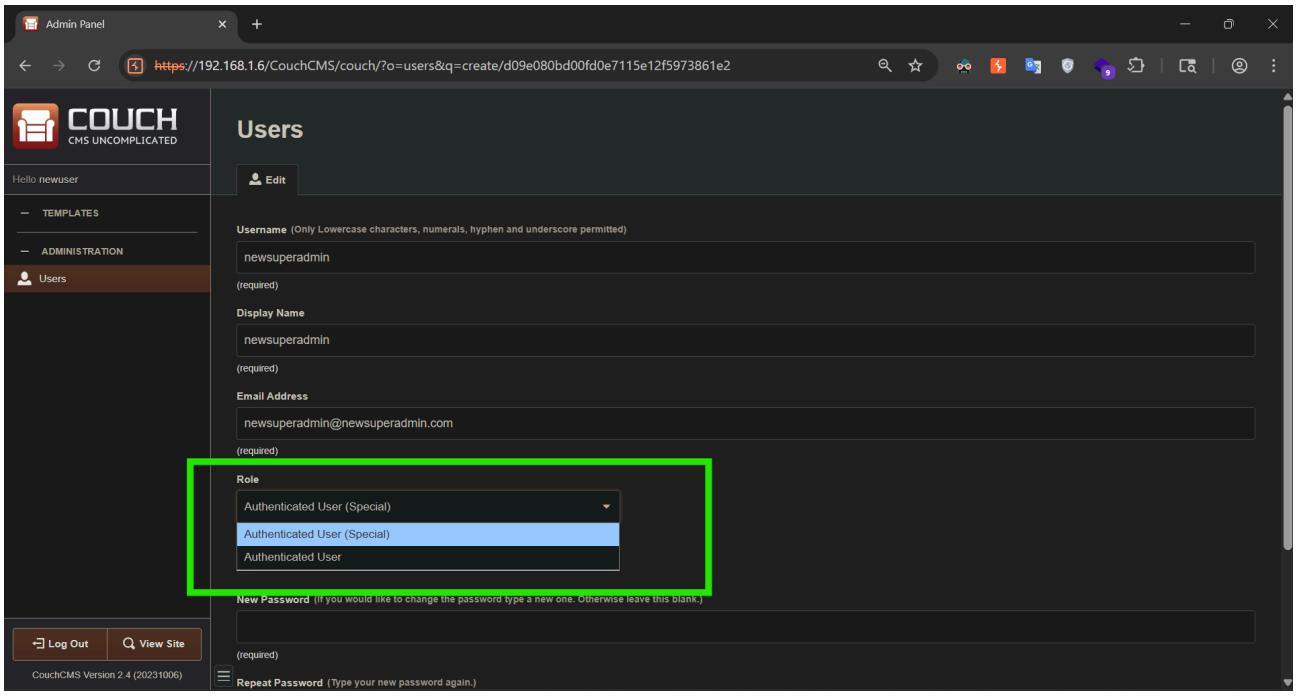
8. Try to Add Any Normal User

Now navigate to the `Users` section, and try to add any normal user of your choice.


Admin Panel
https://192.168.1.6/CouchCMS/couch/
COUCH
CMS UNCOMPLICATED
Welcome
Hello newuser
TEMPLATES
ADMINISTRATION
Users
No templates are being managed by the CMS
Log Out
View Site
CouchCMS Version 2.4 (20231006)


Admin Panel
https://192.168.1.6/CouchCMS/couch/?o=users&q=list
COUCH
CMS UNCOMPLICATED
Users
Add New
Hello newuser
List
TEMPLATES
ADMINISTRATION
Users
Name
Display Name
Email Address
Role
Actions
admin
admin
admin@admin.com
Super Admin
newuser
newuser
user@user.com
Administrator
Bulk action with selected
Apply
Log Out
View Site
CouchCMS Version 2.4 (20231006)



There is no option to add any **SUPER ADMIN** or even **ADMIN** user.

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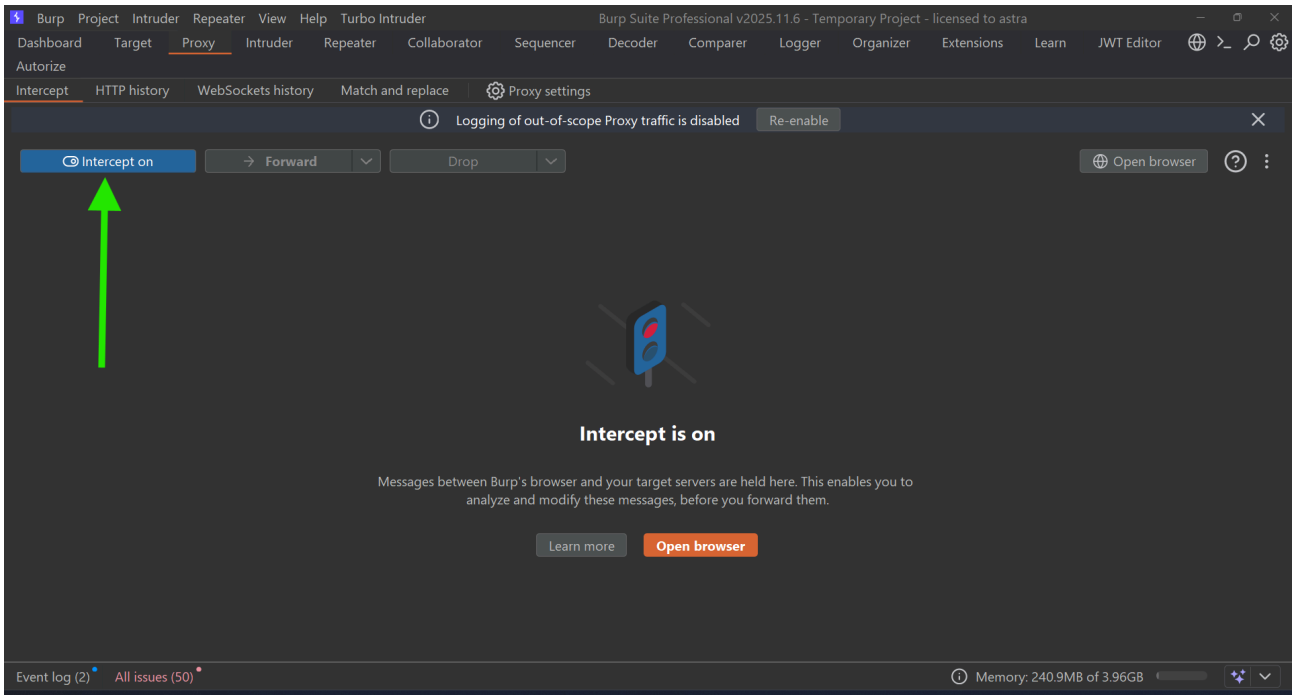
9. Intercept the Request Using Burp Suite

Before submitting the request, open Burp Suite and turn on interception.



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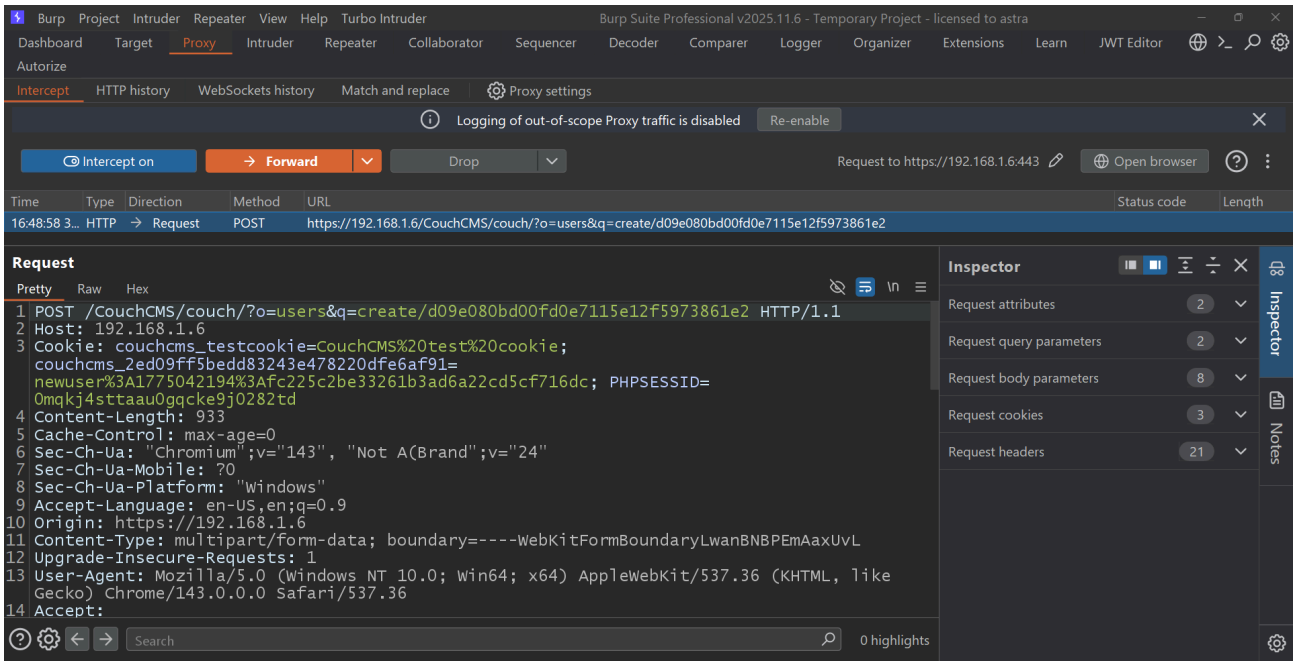
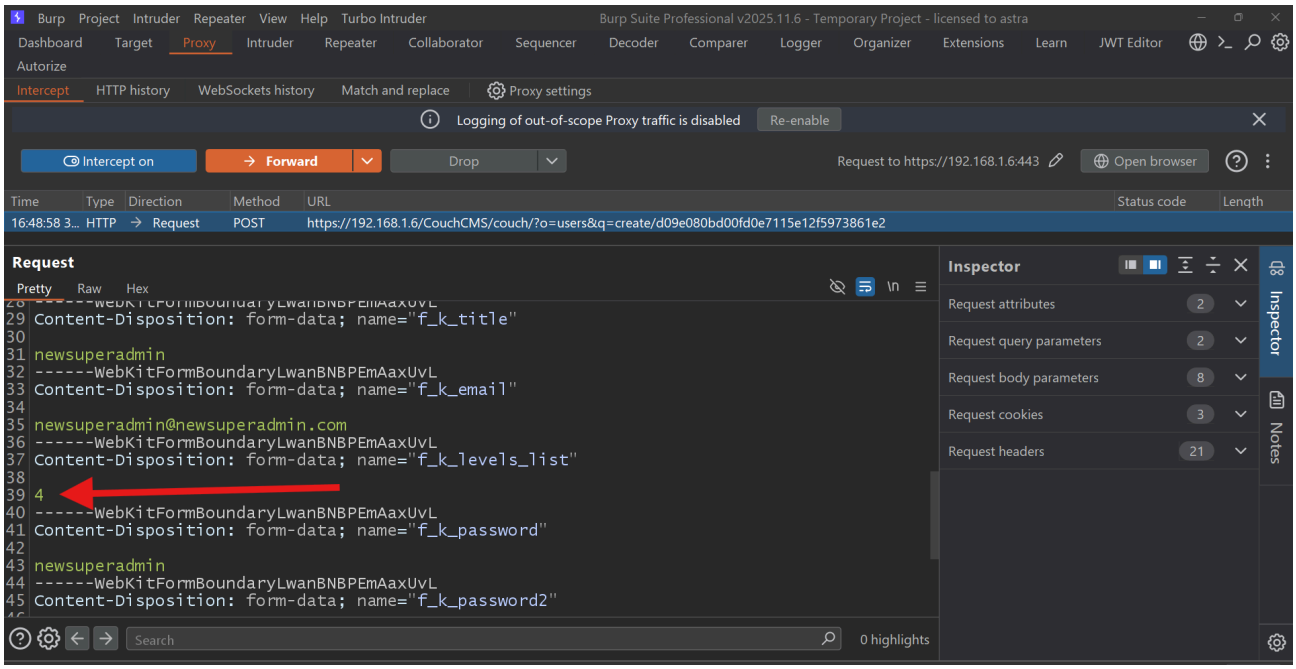
10. Capture the Raw HTTP Request

After clicking on `Save`, you are able to see the raw HTTP request here.



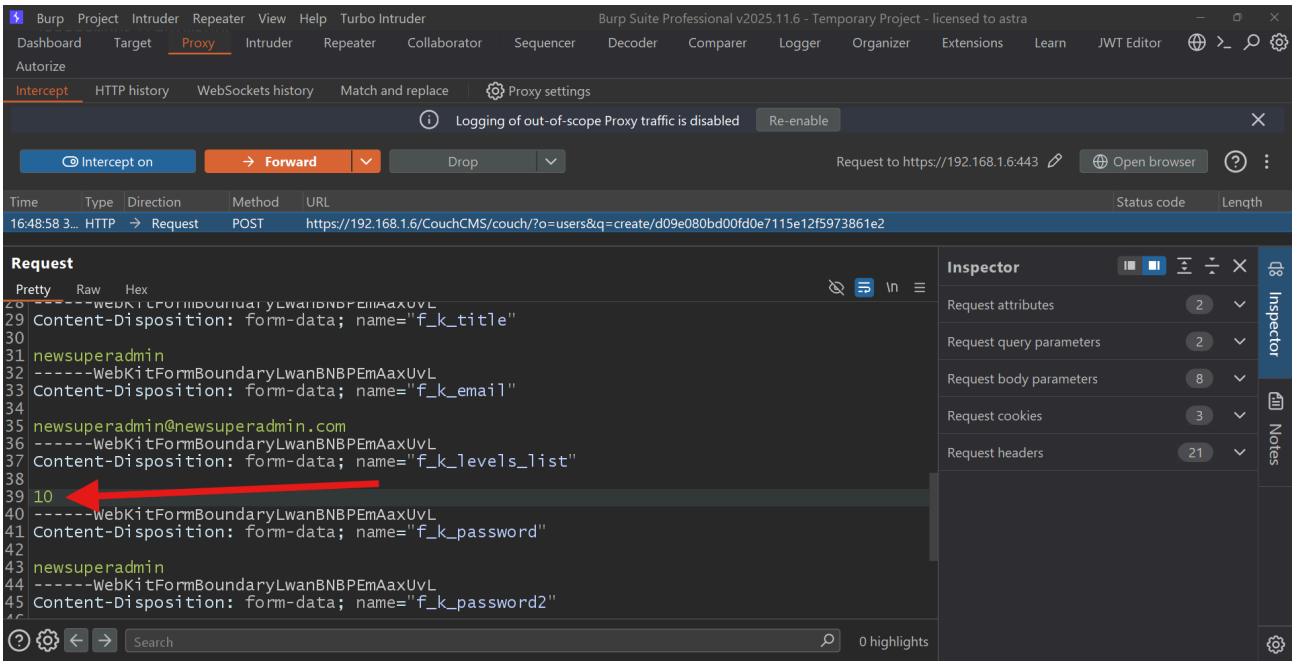
11. Locate the Parameter

Scroll down to the bottom, and you will find a new parameter: `f_k_levels_list`



12. Modify the Parameter Value

This value is `4`, which represents only an authenticated user creation request. Now simply change this value to `10`.

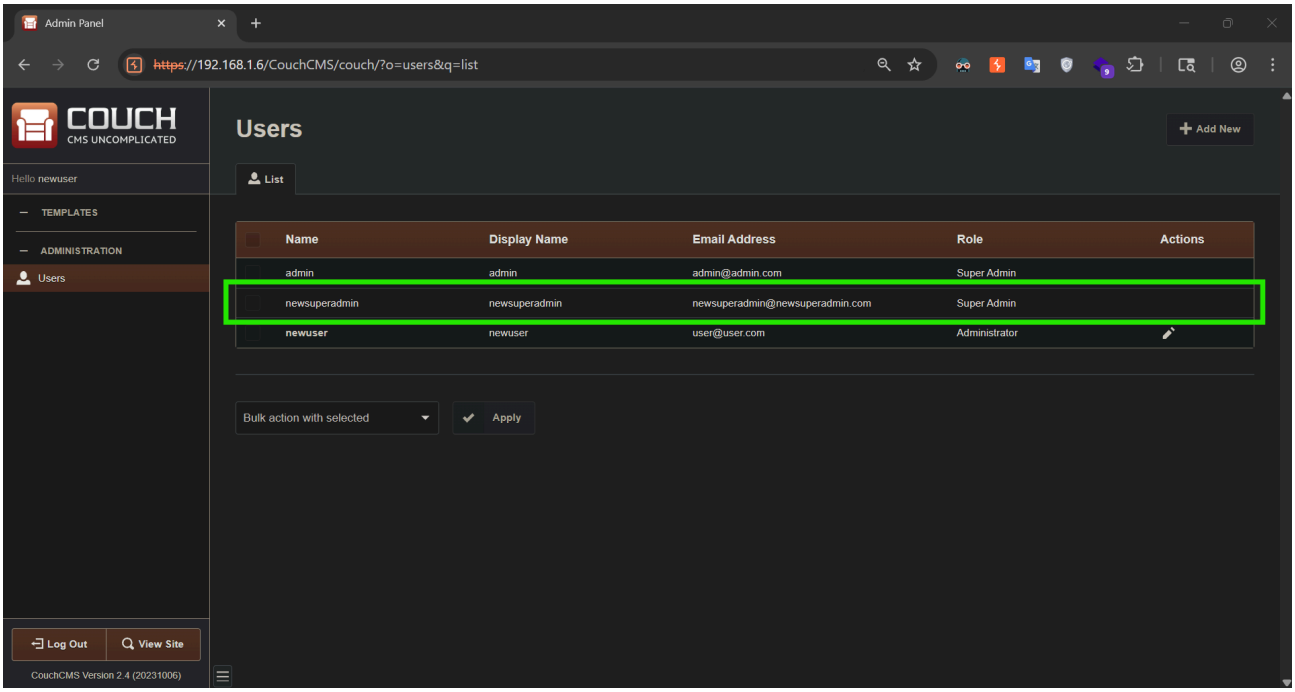


13. Forward the Request

And simply forward this request.

14. Verify the Result

Now navigate to the `Users` section again with the same `newuser`, and you will find that a new `Super Admin` user is created, which is never allowed to be created by this application.



15. Impact

This way, a normal Admin user is able to fully take over the application by adding a `Super Admin` user, which is never intended to be done.