

cpan-authors / XML-Parser Publicforked from [chorny/XML-Parser](#)[Code](#) [Issues](#) [Pull requests](#) 3 [Actions](#) [Projects](#) [Security and quality](#)[New issue](#)

# Buffer overflow in Expat.xs (patch) [rt.cpan.org #19860] #39

Closed#122

Labels

Has Patch

toddr opened on Sep 24, 2019

MemberMigrated from [rt.cpan.org#19860](#) (status was 'new')

Requestors:

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Attachments:

- [XML-Parser-2.34-stackoverflow.patch](#)

From on 2006-06-13 09:26:38

:

While looking through the Expat.xs code, I noticed a potential heap buffer overflow:



Expat.xs, line 498:

```
if (cbv->st_serial_stackptr >= cbv->st_serial_stacksize) {
    unsigned int newsize = cbv->st_serial_stacksize + 512;
    Renew(cbv->st_serial_stack, newsize, unsigned int);
    cbv->st_serial_stacksize = newsize;
}
cbv->st_serial_stack[++cbv->st_serial_stackptr] = cbv->st_serial;
```

Note that in the case (stackptr == stacksize - 1), the stack will NOT be expanded. Then the new value will be written at location (++stackptr), which equals stacksize and therefore falls just outside the allocated buffer.

The bug can be observed using Valgrind when parsing an XML file with

very deep element nesting

A simple fix is to change the test to:

```
if (cbv->st_serial_stackptr + 1 >= cbv->st_serial_stacksize) {
```

Package: XML-Parser-2.34

Perl version: v5.8.5 built for i386-linux-thread-multi

OS: Fedora Core release 3

Bye,  
Joris.



toddr on Sep 24, 2019

Member

Author



```
diff -urN -U 5 XML-Parser-2.34.orig/Expat/Expat.xs XML-Parser-2.34/Expat/Expat.xs
--- XML-Parser-2.34.orig/Expat/Expat.xs 2003-07-28 16:41:10.000000000 +0200
+++ XML-Parser-2.34/Expat/Expat.xs 2006-06-13 11:23:40.000000000 +0200
@@ -493,11 +493,11 @@
     resume_callbacks(cbv);
     cbv->skip_until = 0;
 }
}

- if (cbv->st_serial_stackptr >= cbv->st_serial_stacksize) {
+ if (cbv->st_serial_stackptr + 1 >= cbv->st_serial_stacksize) {
    unsigned int newsize = cbv->st_serial_stacksize + 512;

    Renew(cbv->st_serial_stack, newsize, unsigned int);
    cbv->st_serial_stacksize = newsize;
}
```



**todd** added **Has Patch** on Sep 24, 2019



**todd-bot** added a commit that references this issue [3 weeks ago](#)

fix: off-by-one heap buffer overflow in st\_serial\_stack growth check ...



08dd37c



**todd-bot** mentioned this [3 weeks ago](#)

[fix: off-by-one heap buffer overflow in st\\_serial\\_stack #122](#)



**todd** closed this as **completed** in [#122](#) [3 weeks ago](#)



hartwork 2 weeks ago



This seems to be [CVE-2006-10003](#).



**scop** mentioned this [4 days ago](#)

[t/deep\\_nesting.t not testing intended? #215](#)

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## Metadata

### Assignees

No one assigned

### Labels

**Has Patch**

### Type

No type

### Projects

No projects

### Milestone

No milestone

### Relationships

None yet

### Development

Code with agent mode

**fix: off-by-one heap buffer overflow in st\_serial\_stack**

cpan-authors/XML-Parser

### Participants

