

## strongSwan - Bug #886

### swanctl daemon stats interpretes unsigned number as signed

11.03.2015 18:38 - Noel Kuntze

<b>Status:</b>	Closed	<b>Start date:</b>	11.03.2015
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Tobias Brunner	<b>Estimated time:</b>	0.00 hour
<b>Category:</b>	libcharon		
<b>Target version:</b>	5.3.0		
<b>Affected version:</b>	5.2.2	<b>Resolution:</b>	Fixed

#### Description

"swanctl -S" interprets the sbrk and used counters as signed, but they are unsigned. See the snippet below for the output of "swanctl -S".

```
[root][thermi-pc][~/home/thermi]
└─ swanctl -S
uptime: 50 minutes, since Mar 11 16:21:53 2015
worker threads: 128 total, 99 idle, working: 20/0/9/0
job queues: 0/0/0/0
jobs scheduled: 210323
IKE_SAs: 104867 total, 4 half-open
mallinfo: sbrk -1821679616, mmap 3153920, used -1823622048, free 1942432
```

#### Associated revisions

##### Revision 8286e205 - 13.03.2015 15:25 - Tobias Brunner

stroke: Use %u to print stats returned by mallinfo(3)

References #886.

##### Revision 6d41927b - 13.03.2015 15:26 - Tobias Brunner

vici: Use %u to print stats returned by mallinfo(3)

Fixes #886.

#### History

##### #1 - 13.03.2015 15:34 - Tobias Brunner

- Tracker changed from Issue to Bug
- Category set to libcharon
- Status changed from New to Feedback
- Assignee set to Tobias Brunner
- Target version set to 5.3.0
- Resolution set to Fixed

Interesting, according to man mallinfo the members of struct mallinfo are actually defined as *int*. But it also lists the following BUG:

The fields of the mallinfo structure are typed as *int*. However, because some internal bookkeeping values may be of type *long*, the reported values may wrap around zero and thus be inaccurate.

stats() in vici\_query.c currently uses %d to print these values (as does status() in stroke\_list.c). I guess we could use %u as they are not meant to get negative (see the referenced commits).

But as stated above this will still not always result in accurate numbers. On a 64-bit Linux system an *int* is 4 bytes while a *long* is 8 bytes so at most 4 GB of allocations can be tracked, beyond that the numbers will be way too small. We can't do much about that though (we could use malloc\_info(3) but we'd have to parse the returned XML afterwards, eww).

##### #2 - 13.03.2015 20:41 - Noel Kuntze

Well, so I guess swanctl should get the stats from some other kernel API then?

**#3 - 16.03.2015 11:00 - Tobias Brunner**

Well, so I guess swanctl should get the stats from some other kernel API then?

The information printed is not from the kernel, but from the C library's memory allocator (see man mallinfo for details). As mentioned, there is an alternative when using glibc (malloc\_info), which I guess produces the correct numbers, but parsing XML data just for this information is currently no option. Anyway, it will take quite some load until charon actually uses 4 GB of memory.

**#4 - 24.03.2015 12:38 - Tobias Brunner**

- *Status changed from Feedback to Closed*