

strongSwan - Bug #3210

Missing SADB_X_EXT_ in kernel_pfkey plugin for FreeBSD

16.10.2019 16:36 - Jean-François Hren

Status:	Closed	Start date:	
Priority:	Normal	Due date:	
Assignee:	Tobias Brunner	Estimated time:	0.00 hour
Category:	kernel-interface	Resolution:	Fixed
Target version:	5.8.2		
Affected version:	5.8.1		

Description

Hello,

There is some SADB_X_EXT_ missing in the kernel_pfkey plugin when under FreeBSD. It's not really an issue since everything is working correctly. However when the verbose is enabled and we receive a SADB_X_EXT_SA_REPLAY extension, a crash can occur. We patched kernel_pfkey_kernel.c with the missing extensions and it fixed our issue.

Thank you

Associated revisions

Revision a0a03c25 - 28.10.2019 18:46 - Tobias Brunner

Merge branch 'enum-strings'

Adds a compile check the number of enum strings and updates several of these lists, in particular, the one in the pfkey-kernel plugin, where strings for several new extensions on FreeBSD were missing.

Fixes #3210.

History

#1 - 16.10.2019 19:58 - Tobias Brunner

- *Tracker changed from Issue to Bug*
- *Status changed from New to Feedback*
- *Target version set to 5.8.2*

The dependency on constants and structs defined in a platform-specific header file is definitely not ideal. However, we don't use most of the structs (and those we do are portable or inside ifdefs), so this is mainly an issue with the strings for the debug messages. The crash comes from the fact that SADB_EXT_MAX is used in the ENUM() call, which might be larger than the last constant we actually have a string for. Using a different constant is tricky as compilation fails if the header doesn't define it. But I think we can at least fix the crash and just print the numeric identifier for unknown identifiers.

Regarding adding additional structs/strings, I had a look at the different headers. Linux, FreeBSD and macOS are the same up to SADB_X_EXT_SA2 (19), then macOS diverges. FreeBSD and Linux do so after SADB_X_EXT_NAT_T_DPORT (22), as you already noticed. FreeBSD and macOS might share 27/28 again (address migration), although it looks like macOS might use its own message and not SADB_UPDATE for this, so that is probably without consequence. OpenBSD uses a completely different set of custom extensions, but strongSwan currently doesn't run on it, so I guess we can ignore that for now.

Anyway, adding the strings should be OK, however, adding structs could be tricky when compiling on older versions of a platform whose headers don't yet include that struct, so that requires some ifdefs.

I pushed two commits to the *3210-pfkey-ext* branch.

#2 - 17.10.2019 12:05 - Jean-François Hren

I tested the *3210-pfkey-ext* branch and it worked fine. Thank you.

#3 - 25.10.2019 15:55 - Tobias Brunner

I tested the *3210-pfkey-ext* branch and it worked fine. Thank you.

Thanks for testing. I've now replaced the runtime check with one that should be evaluated during compilation (which already revealed several missing strings in our codebase). Does that still work for you (the FreeBSD build on Cirrus-CI [was successful](#), so I'm hopeful :)?

#4 - 25.10.2019 16:59 - Jean-François Hren

It still works for us, thank you.

#5 - 28.10.2019 18:50 - Tobias Brunner

- *Status changed from Feedback to Closed*

- *Assignee set to Tobias Brunner*

- *Resolution set to Fixed*

Thanks for testing, merged to master.

Files

patch-fix-verbose-pfkey	1.41 KB	16.10.2019	Jean-François Hren
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