



# Upstreaming

## A DOCUMENTATION BUGFIX

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*The FreeBSD documentation set consists of a large number of documents, man pages, and websites. These are great ways for newcomers to get involved in the community and contribute something back to the operating system. Changes are submitted via Phabricator when there is already a patch available that doc committers can review. Other ways to report bugs are the mailing list ([freebsd-doc@freebsd.org](mailto:freebsd-doc@freebsd.org)) and of course Bugzilla.*

One such bug was recently reported in [https://bugs.freebsd.org/bugzilla/show\\_bug.cgi?id=231994](https://bugs.freebsd.org/bugzilla/show_bug.cgi?id=231994). It did not provide much of a description but had the right keywords to pique my interest. The subject line read “sudoers repeated word,” which meant that it was for the widely-used security/sudo port. Repeated words are a common mistake when people are writing documentation in a hurry and/or don’t proofread (or don’t have a second set of eyes to do that). The first thing I did was confirm that the reported error was in fact still present in the sudoers file in the most current version. Sometimes people report bugs that are already fixed in the HEAD revision of the port, simply because they did not update to the latest version or someone corrected the error in the meantime. In this case, there was, indeed, a repeated “and and” in the sudoers manual page.

Since FreeBSD does not maintain the sudo software itself (except maybe some local patches), the right way to approach this is not to just fix it locally in our own project, but to report the issue upstream. That way, not only does the sudo project know about the issue, it can look for a solution. Once the issue has been fixed and a correct-

ed version released, all other projects (including FreeBSD) receive these fixes when they install the newer version. There is a much wider impact than just fixing the problem locally.

The sudo project, which can be found at <https://www.sudo.ws/>, also has a bugzilla instance where people can report bugs. Creating an account there was simple enough and once I confirmed my account via the usual sign-up confirmation email, I could create an issue. While doing that, I thought about the fact that repeated words seldom appear alone, so I looked for other instances in the man page. After a brief search, I found other occurrences. Then I realized that by manually reading the man page, I might miss an instance.

A couple years ago, Warren Block wrote a perl-based tool called igor, the friendly lab assistant, (<http://www.wonkity.com/~wblock/igor/>) that can be run over man pages and DocBook XML pages to check for various issues. One such check is for repeated words, and, fortunately, the tool is flexible enough to be used outside of FreeBSD. As a result, I ran igor on the sudoers man page and it reported issues other than just repeated words. Getting more and more suspicious that this might also be the case for other man pages in the sudo project, I ran igor on those as well and got a number of hits for other problems.

The sudo project maintains various man page formats with slightly different syntax, so I had to make individual changes to those. The nice thing about man page changes is that they can be viewed immediately by running the `man(1)` program and passing the changed man page to it as a parameter. No need for lengthy compiles, so you’ll get quick feedback for the changes you made. Once I had fixed all issues reported by igor (including the originally reported one that got us here), I created a patch using `diff -ruN`. The patch was attached to the issue [https://bugzilla.sudo.ws/show\\_bug.cgi?id=854](https://bugzilla.sudo.ws/show_bug.cgi?id=854) in sudo’s bugzilla with a description and link to the igor tool.

It did not take long until Todd Miller took the patch and integrated it (<https://www.sudo.ws/repos/sudo/rev/4ddcb625f3b7>). He was also intrigued by igor and wrote in the issue: "Thanks, I've added an 'igor' target to the doc Makefile and will fix the things it finds that seem like problems." This means that in the future, each time there are documentation changes in sudo, igor will run as part of the man page and may report issues. That way, quality issues can be fixed before they hit the src repository and are not distributed in the next release.

Meanwhile, a new sudo version 1.8.26 was released that contained the documentation fixes, and they were even mentioned in the release notes (<https://www.sudo.ws/stable.html#1.8.26>). The FreeBSD port was updated shortly after (<https://svnweb.freebsd.org/ports?view=revision&revision=484929>) and so the fixes are available as part of FreeBSD too. That way, what started out with a small error reported to a downstream project consuming sudo turned into a larger patch for multiple doc issues reported and fixed upstream. This happens all the time in open-source projects and not just for documentation. The same thing is done for src and ports and is a great demonstration of collaboration and exchange of fixes, tools, and ideas that benefit everyone. The nice thing is that it is easy to start with documentation work, especially man pages. Small fixes are as worthwhile as big improvements and, as you saw, may lead to bigger things than initially meet the eye.

People interested in starting out with documentation work should take a look at the FreeBSD

Documentation Project primer ([https://www.freebsd.org/doc/en\\_US.ISO8859-1/books/fdp-primer/](https://www.freebsd.org/doc/en_US.ISO8859-1/books/fdp-primer/)). The quickstart section explains everything that is needed in terms of tools and getting the sources. Once you have that, you can start bug hunting in the docs. Installing the textproc/igor port is simple using FreeBSD's pkg tool. Once you find a bug, make sure that it has not been reported or fixed as yet. If it has not, be sure to report it to the project and people that are actually maintaining it. Many projects have a bug tracking system or a mailing list where issues can be reported. Make sure to include as much information as possible and a clear description along with any patches you might have already created. This increases the chance that your patch will be looked at and taken care of. If you have any questions about the FreeBSD documentation process, you can ask them on the freebsd-doc mailing list or find us on IRC in the #bsddocs channel on Efnet. •

***BENEDICT REUSCHLING** joined the FreeBSD Project in 2009. After receiving his full documentation commit bit in 2010, he actively began mentoring other people to become FreeBSD committers. He is a proctor for the BSD Certification Group and joined the FreeBSD Foundation in 2015, where he is currently serving as vice president. Benedict has a Master of Science degree in Computer Science and is teaching a UNIX for software developers class at the University of Applied Sciences, Darmstadt, Germany.*



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