

Welcome to sparse's documentation

About Sparse

Sparse, the semantic parser, provides a compiler frontend capable of parsing most of ANSI C as well as many GCC extensions, and a collection of sample compiler backends, including a static analyzer also called *sparse*. Sparse provides a set of annotations designed to convey semantic information about types, such as what address space pointers point to, or what locks function acquires or releases.

Linus Torvalds started writing Sparse in 2003, initially targeting issues such as mixing pointers to user address space and pointers to kernel address space.

Josh Triplett was Sparse's first maintainer in 2006. This role was taken over by Christopher Li in 2009 and by Luc Van Oostenryck in late 2018.

Getting Sparse

The most recent version can be obtained directly from the Git repository with the command:

```
git clone git://git.kernel.org/pub/scm/devel/sparse/sparse.git
```

You can also [browse the Git repository](#) or use the mirror at <https://github.com/lucvoo/sparse>. The tarballs of released versions of Sparse and their signatures can be found at <https://www.kernel.org/pub/software/devel/sparse/dist/>.

Once you have the sources, to build Sparse and install it in your `~/bin` directory, just do:

```
cd sparse
make
make install
```

To install it in another directory, use:

```
make PREFIX=<some directory> install
```

Contributing and reporting bugs

Submission of patches and reporting of bugs, as well as discussions related to Sparse, should be done via the mailing list: linux-sparse@vger.kernel.org. You do not have to be subscribed to the list to send a message there. Previous discussions and bug reports are available on the list archives at <https://marc.info/?l=linux-sparse>.

To subscribe to the list, send an email with `subscribe linux-sparse` in the body to `majordomo@vger.kernel.org`.

Bugs can also be reported and tracked via the [Linux kernel's bugzilla for sparse](#).

User Documentation

- [Annotations](#)

Some interesting external documentation:

- [Sparse: a look under the hood](#)
- [Sparse: a short overview](#)

Development

- [Submitting patches](#)
- [Type System](#)
- [Sparse API](#)
- [Extra options for developers](#)
- [Intermediate Representation](#)
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