

## TAR

On a Unix platform, tar command is the primary archiving utility. It takes a host of parameters, but the basic usage was tested in the following ways.

1. The source was built using the clang sanitizer checking for undefined behavior and integer overflow errors at runtime.
2. A pdf file was compressed and archived with tar.
3. The file was unarchived and decompressed with tar.
4. A bitwise comparison confirmed that the file was the same before and after compressing and archiving.
5. If this process succeeded for a given pdf, a random bit in the file was flipped the process repeated.

This processes was repeated flipping up to 3000 bits in the input file. At no time was the file different before and after archiving and compressing. Additionally, clang detected no runtime overflow or undefined behavior during this process.

Additional tests were made with the tool's command line interface. 3000 random strings were input on the command line. The utility exited gracefully when necessary.

This tool is safe for production code.