

## Purpose

`hblock(1)` is a shell script, available on homebrew, that blocks ads, beacons and malware sites. It does this by editing `/etc/hosts` and setting the IP address for such sites to 0.0.0.0. The issue is that `hblock` sometimes adds sites to `/etc/hosts` that are needed.

This executable fixes such issues by adding good DNS hosts to the exclusion list (`/etc/hblock/allow.list`) and removing the corresponding entry from `/etc/hosts`. It will also optionally flush the DNS cache and restart the `mDNSResponder` daemon.

## Versions

There are two versions of the solution:

- a bash shell script (`fix-hostfiles.sh`) located in `src/fix-hosts-bash`, and a
- C program (`fix-hostfiles.c`) located in `src/fix-hosts-c` that does the same.

The shell script does all that needs doing and does so in a lightweight manner. The motivation for the C version was twofold:

- To measure the performance difference between the two solutions, and
- To see how easy or difficult it would be for a C program to perform the same functions.

My a priori predictions are:

- the executable will be substantially less performant, mainly due to the overhead of instantiating the program — and the programs it would in turn spawn — and
- that the C program would be harder to concoct since I don't think that there are library functions to perform all the stuff I get for free in shell land (e.g. `sed(1)`, `grep(1)` and `dscacheutil(1)`), but I knew I'd learn something along the way.

## Design Specs and man pages

There are design specs for each solution.

The associated man pages (the man pages for each solution have minor but meaningful differences) may do a better job of explaining the final products.

## TODO

- ☒ Write the design spec for the C implementation
- ☒ Create a separate MD file for `hblock allow list` with hard link between both project dirs

- ☐ Update makefile in config dir
- ☐ Update skell.c in config dir
- ☒ Update the way VSC formats code: it's breaking up long lines
- ☐ Update bash script with updates and lessons learned from this C project.