

## Minimuslibc Implementation

### A C library used by the emulation library

The emulation library requires using Linux system call wrappers as well as other functionalities to make developing easier. However, the current muslibc is modified and used by seL4 system, so we can't use those APIs provided by muslibc. To do that I tried:

- Link glibc on the host: can't link glibc on the host as the seL4 application are statically compiled and linked. ✗
- Load glibc at runtime: the dynamic library provides **dlopen**, **dlsym** and so on depends on glibc itself. And porting those functions are complicated. ✗
- Change symbol names: the current working approach is quite simple. We ported a part of the muslibc code with symbol names changed and linked with the emulation library. (named **minimuslibc** :-)) ✓

The current minimuslibc provides:

- socket related APIs such as **mini\_socket**, **mini\_accept**, etc..
- I/O APIs such as **mini\_write**, **mini\_read**, etc.
- memory mapping APIs such as **mini\_mmap**, etc.
- signal APIs such as **mini\_sigaction**, **mini\_sigstack**, etc.

The minimuslibc is **not thread safe** for the simplicity will explain in later sides.