Design and Implementation of an Alternative to SSH
Meeting Minutes

1 Attendees

Present: Stephan Neuhaus, Raphael Emberger, Kevin Schwarz

2 Initiation

The meeting took place on the *Friday, 12th of April 2019, 13:00* in *ZL0.13, Lagerstrasse 45, Zürich*. Raphael Emberger was resonsible for the minutes.

3 Points of discussion

3.1 Participation of Mr. Schwarz

Mr Schwarz decided to opt out of the project because of time issues. Mr Neuhaus will therefore adapt the outline of the project.

3.2 Reading user data works

The new module to read user data via the getpwnam(3) API has been implemented using cgo. It can read all the required data(i.e. the user shell which wasn't supported in the go standard library).

3.3 Forking implemented, but causes problems

Forking has been implemented via cgo but after forking, the net.Conn object cannot be used by the child process. There is also the to further investigate, whether after forking a new process actually gets started, as a quick look at the processes didn't reveal that a fork has been processed.

Solution   To counter this problem it is suggested to do the connection build up via cgo using the C-socket API. This returns an integer as a file descriptor, which shouldn't cause problems when forking.

3.4 Remote start and handling of a shell has issues

After successfully hooking up the channels from the client to the shell process, almost all mechanics work as expected with exception of missing characters like the PS{1,2,3,4} prompts.

Solution   It is suggested to compare the environment variables of the child shell process and the usual terminals to see if there are deal breaking differences. Adjusting the child shells environment variables might fix the problem.

4 Old Business

- **Login attempts in Linux fail:** This problem was deemed lower priority, as Login works on the WSL and can still be dealt with in later stages of the project.

Next Meeting

Friday, 26th of April 2019, 13:00 in *ZL0.13, Lagerstrasse 45, Zürich*