Design and Implementation of an Alternative to SSH
Meeting Minutes

1 Attendees

Present: Stephan Neuhaus, Raphael Emberger

2 Initiation

The meeting took place on the *Friday, 3th of May 2019, 13:00* in *ZL0.13, Lagerstrasse 45, Zürich*. Raphael Emberger was resonsible for the minutes.

3 Points of discussion

3.1 Pty echoes stdin back to stdout on client

The suggested solution from last meetings 3.2 of setting the client terminal into raw mode worked out well and has since been implemented like this.

3.2 SockAddr

The x-package `unix` provides wrappers for common Unix API calls. Most of the handling with sockets could be transferred to their methods, except `getpeername(3)`, which was implemented in the old way using CGo. The reason being that the returned `SockAddr` interace from `accept(3)` and `getpeername(3)` couldn't be casted(or rather: type-asserted) to be used as `SockAddrInet4` struct.

Solution After some experiments and searching the internet, it was revealed that the type assertion had to use pointers instead.

3.3 Role of login in the application

Just relying on `login` to perform all the important steps to log a user in is not a viable solution, as this would make log in via keys impossible. Therefore, it was made so the server decides whether to attempt to log in via keys or just to call `login`. Key authentication has been implemented as well and doesn't rely on `login`.

3.4 Documentation and bug-fixes before new features

It was deemed better to stop implementing new features as time is about to run out. Therefore, it is suggested to invest 80% of the remaining time to write on the documentation and 20% on bug-fixing. Only after everything has been finished, can new features be implemented - if at all.

3.5 Documentation chapter renaming

The original template for the BSc thesis has chapters named "Theoretical Principles" and "Method" in them, which will be renamed to the more appropriate "Design" and "Implementation". The latter will not reflect the progress in a chronological order but instead order it point by point.

3.6 Login attempts in Linux fail

Relying on `login` finally solved the problem of logging in on a specific linux distribution. The log in via keys also works, as the problem was originally PEM dependent, which gets omitted when authenticating via keys.

Next Meeting

Friday, 10th of March 2019, 12:30 in *ZL0.13, Lagerstrasse 45, Zürich*