

High Performance Computing

Collaborating via TMux

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In the background the terminal multiplexer works with “sockets”, files that are accessible to other tmux instances. We use this to establish a collaborative environment.

A new session with explicitly chosen socket

The flag `-S` to the command `tmux` allows to specify a socket explicitly.

Assume that you have an account `hpcuserXXX`, where `XXX` stands for a three digits number specific to you. Run

```
tmux -S /tmp/tmuxsocketXXX new
```

to create a new `tmux` session associated with the socket file at `/tmp/tmuxsocketXXX`.

Anybody with access to `/tmp/tmuxsocketXXX` can access your multiplexed terminal session.

Making sockets available

Do not access socket files of others, if they did not agree!

What suggested here is highly unsafe and relies on personal integrity of each student. A more conventional, and reasonable setup would employ user groups, but we avoid this for simplicity.

After creating a tmux session with socket `/tmp/tmuxsocketXXX`, run

```
chmod o+rw /tmp/tmuxsocketXXX
```

This makes the socket read- and writable to everybody on the system.

Allowing access

In recent versions of tmux, you also need to allow access to each user you want to collaborate with.

Run

```
tmux -S /tmp/tmuxsocketXXX server--access -a hpcuserYYY
```

where YYY stands for the three digits of specific to the students that you want to work with.

Connecting to TMux sessions

Other students or the teachers can now connect to your TMux session with the command

```
tmux -S /tmp/tmuxsocketXXX attach
```

Everything that anyone connected to a socket does in the terminal will be visible to everyone connected to that socket.

Maintaining TMux sessions

Given the possibility of sharing TMux sessions, you may want to name sessions. You can provide the flag `-s` to provide a name when creating a new session or attaching for the first time a socket provided by someone else.

For example,

```
tmux -S /tmp/tmuxsocketXXX new -s hpcgpXXX
```

would create a session called `hpcgpXXX`.

When listing sessions via

```
tmux list -sessions
```

this name will be associated to that session.

Attaching and killing specific sessions

You can attach a specific session by providing its name to the `attach` argument. For instance,

```
tmux attach hpcgpXXX
```

attaches the session called `hpcgpXXX`.

You can kill, i.e. terminate, a session by the argument `kill -session`. For example,

```
tmux kill -session hpcgpXXX
```

terminates the session called `hpcgpXXX`.

Abbreviations

For clarity we have written out arguments to `tmux`.

The argument `new` when creating a session can be suppressed.

The argument `attach` can be abbreviated as `a`.