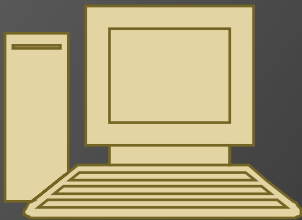# Introduction

- Web EXecution
- Graphical user interface for constructing shell scripts
- Diagram oriented
- Module based
- Client-Server implementation
- Supervisor: Miloš Šrámek
- Developed for project f3d

Motivation

- Current situation:
  - Many projects are based on modules (filters)
  - They have command line input
  - User very unfriendly
- Suggestion:
  - Graphical user interface (we love mouse-clicks ☺)
  - Diagram-based (easier to understand the execution plan)
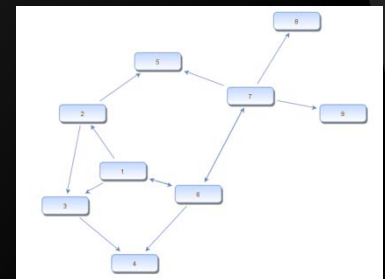 - For server environment - thin web client (they don't have to use ssh)

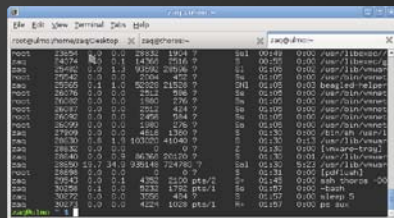# Component overview

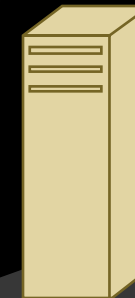Client station   Web browser   Thin client - Diagram
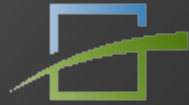
http://

Linux server

Shell script

f3dmodules

Target environment

- Project consists of independent modules (filters) that work upon same type of data.
- Modules are simple programs that can be executed from command line
- Data can be transferred, for example through pipe, or sockets
- Some modules can have multiple input streams or multiple output streams
- Between modules can be defined interfaces to bring control over flowing data structure

Client

- Library mxGraph
- Java library for editing diagrams using applet technology
- User-painted activity diagrams

Server

- Java library JGraphX
- Jetty web server
- Http servlet technology
- Client sends diagram specification in xml format
- Automaticly java object are created
- Transform diagram to shell script
- Execute script

Bachelor work – Ivan Grund

WebEx

Environment

- OS: **Gentoo**
- Window Manager: **Gnome**
- Programming IDE: **Eclipse**
- Browser: **Firefox**
- Web server: **Jetty**
- Project management: **Google Code**

Related work

- Unbelievable, but I have no competition

- There are some project, but the are only for web access to shell

- Examples:
  http://sourceforge.net/projects/matahari/
  http://sourceforge.net/projects/shcmd/

Project f3d

- Volume data processing and rendering
- Modules for different algorithms
- f3dread, f3dwrite, f3dslice, f3dgauss

Current progress

- Running Jetty web server
- Deployed JGraphX
- Running Java applet
- Created some diagrams
- Diagrams sent to server

Future work

- Several milestones
- 5.4. - Running "Happy path"
- 26.4. – Running any diagram
- 10.5. – Realtime f3dslice view
- 24.5. – Text for bachelor work
- 12.6. – Reserve

Security

- Web server running as a user
- User data available in special directory (like public_html)

Problems

- Deciding for client technology
- Javascript library – for every user
- Java applet – better posibilities