

# SEWS (Zeus)

*Simple Erlang Web Server*

*Grupp 6*

*Alex, Daniel, Dennis, Johannes, Jonathan,  
Per*



# Goals - SimpleErlangWebServer

- Handle simple download cases
- Handle simple upload cases
- Directory listing
- Configurable server root path
- Cache - ETS
- Dynamic script language



# Organization

- Regular meetings
- Work together
- Pair programming

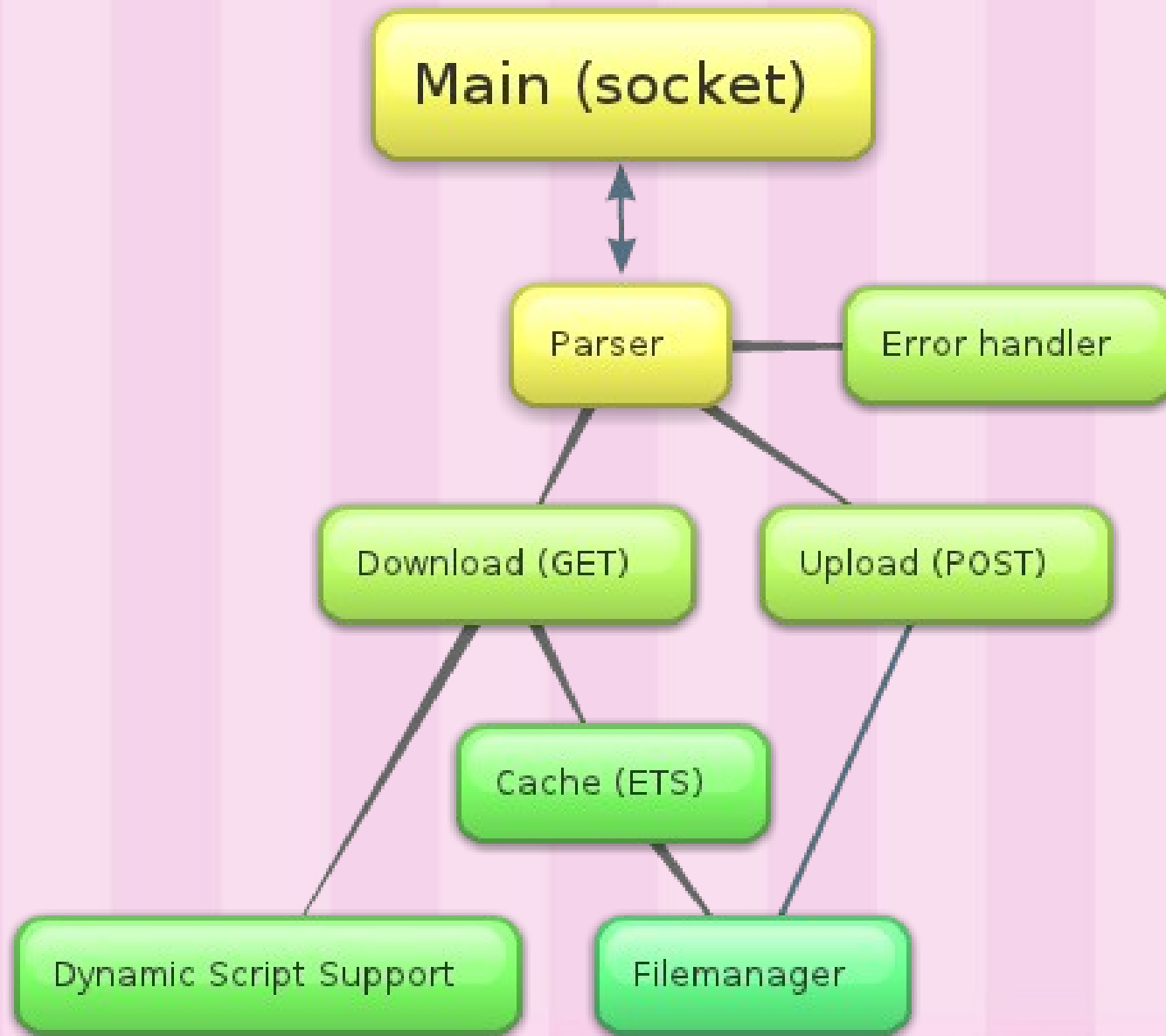


# Tools of trade

- Git - hosted at [github.com/sews](https://github.com/sews)
- Make
- GNU-Plot
- Ubuntu
- Emacs
- Apache Benchmark
- Webrowsers (anyone! except opera...)



# Web server structure



# Cache - Algorithms

Least Recently Used  
Random Replacement

Which one to use?

"Easy" implementation  
of new cache-algorithms

Possible max cache and  
file size settings for  
cache.

ETS-table

YOU choose the  
algorithm!

The cache module is  
independent from the  
algorithms.

Or do you want to store a  
4GB movie in your cache?



# Enter the Cache

**start**(Name)->

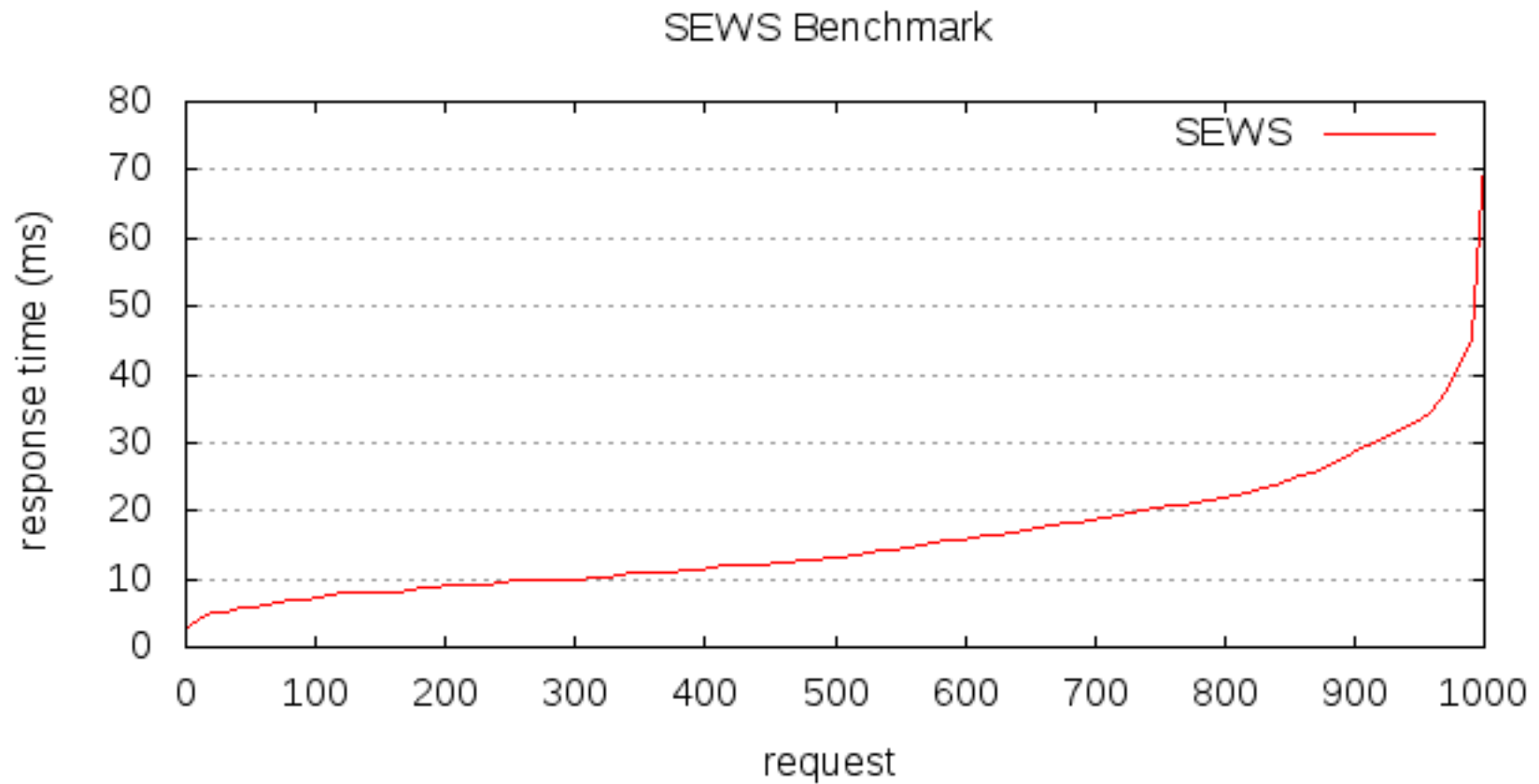
```
start(Name,fun(X,Y) -> cache_kf:lru(X,Y) end,  
      ?MAX_CACHE_SIZE,?MAX_FILE_SIZE).
```

**start**(Name,Fun,MaxCacheSize,MaxFileSize) ->

```
ets:new(Name,?ETS_OPTIONS),  
ets:insert(Name,  
            {metadata,[{max_cache_size,MaxCacheSize+1},  
                       {killfun,Fun}, {max_file_size,MaxFileSize},  
                       {etslist,[]}]})
```



# Benchmark!





# Benchmark

## SEWS

Concurrency Level: 10

Request: 1000000

(ms)

50% 5

66% 5

75% 5

80% 6

90% 6

95% 6

98% 7

99% 7

100% 3016 (longest request)

## APACHE

Concurrency Level: 10

Request: 1000000

(ms)

50% 3

66% 3

75% 3

80% 3

90% 3

95% 3

98% 3

99% 3

100% 3021 (longest request)



# Benchmark

## SEWS

Concurrency Level: 100  
Request: 100000

(ms)

50% 13

66% 14

75% 15

80% 15

90% 17

95% 18

98% 22

99% 215

100% 9043 (longest request)

## APACHE

Concurrency Level: 100  
Request: 100000

(ms)

50% 31

66% 31

75% 31

80% 31

90% 32

95% 32

98% 32

99% 32

100% 47 (longest request)



# HOW TO CONFIGURE AND RUN

1. OPEN INCLUDE/CONFIG.HRL

2. CHANGE YOUR SETTINGS

3. RUN!

```
erl -pa ebin  
main:start().
```



DEMO

