

My Awesome Server

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Chapter 1

Data Structure Index

1.1 Data Structures

Here are the data structures with brief descriptions:

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Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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webserver/log.c	27
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webserver/socket.c	35
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webserver/stats/stats.c	37
webserver/stats/stats.h	39

Chapter 3

Data Structure Documentation

3.1 http_request Struct Reference

```
#include <http_parse.h>
```

Data Fields

- enum [http_method](#) `method`
- int [http_major](#)
- int [http_minor](#)
- char [target](#) [[MAX_TARGET_SIZE](#)]
- char * [headers](#) [20]

3.1.1 Detailed Description

describes a http request

3.1.2 Field Documentation

3.1.2.1 headers

```
char* http_request::headers[20]
```

headers of the request

3.1.2.2 http_major

```
int http_request::http_major
```

major HTTP version of the request

3.1.2.3 http_minor

```
int http_request::http_minor
```

minor HTTP version of the request

3.1.2.4 method

```
enum http_method http_request::method
```

HTTP method of the request

3.1.2.5 target

```
char http_request::target[MAX_TARGET_SIZE]
```

target of the request

The documentation for this struct was generated from the following file:

- [webserver/http/http_parse.h](#)

3.2 server_config Struct Reference

```
#include <config.h>
```

Data Fields

- int [port](#)
- char [listen_addr](#) [PATH_MAX]
- char [website_root](#) [PATH_MAX]
- char [mimes_file](#) [PATH_MAX]

3.2.1 Detailed Description

struct for saving the configuration of the server

3.2.2 Field Documentation

3.2.2.1 listen_addr

```
char server_config::listen_addr[PATH_MAX]
```

ip address to listen

3.2.2.2 mimes_file

```
char server_config::mimes_file[PATH_MAX]
```

mime types file path

3.2.2.3 port

```
int server_config::port
```

port to listen

3.2.2.4 website_root

```
char server_config::website_root[PATH_MAX]
```

web root of the site to serve

The documentation for this struct was generated from the following file:

- [webserver/config/config.h](#)

3.3 web_stats Struct Reference

```
#include <stats.h>
```

Data Fields

- int [served_connections](#)
- int [served_requests](#)
- int [ok_200](#)
- int [ko_400](#)
- int [ko_403](#)
- int [ko_404](#)
- int [ko_405](#)

3.3.1 Detailed Description

struct for the stats

3.3.2 Field Documentation

3.3.2.1 ko_400

```
int web_stats::ko_400
```

number of 400 responses the server has sent

3.3.2.2 ko_403

```
int web_stats::ko_403
```

number of 403 responses the server has sent

3.3.2.3 ko_404

```
int web_stats::ko_404
```

number of 404 responses the server has sent

3.3.2.4 ko_405

```
int web_stats::ko_405
```

number of 405 responses the server has sent

3.3.2.5 ok_200

```
int web_stats::ok_200
```

number of 200 responses the server has sent

3.3.2.6 served_connections

```
int web_stats::served_connections
```

number of connections the server has received

3.3.2.7 served_requests

```
int web_stats::served_requests
```

number of request the server has received

The documentation for this struct was generated from the following file:

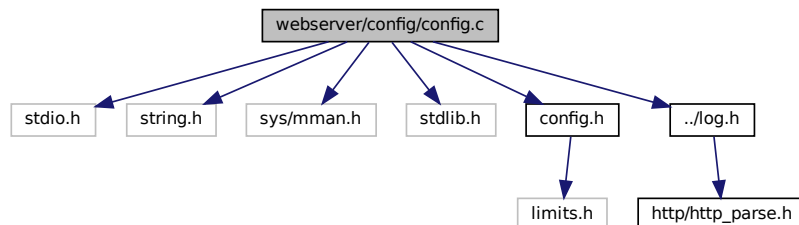
- [webserver/stats/stats.h](#)

Chapter 4

File Documentation

4.1 webserver/config/config.c File Reference

```
#include <stdio.h>
#include <string.h>
#include <sys/mman.h>
#include <stdlib.h>
#include "config.h"
#include "../log.h"
Include dependency graph for config.c:
```



Functions

- `int init_config (char *abs_path)`
- `int get_config_from_file (char *abs_path)`
- `server_config * get_config (void)`

Variables

- `server_config * shared_mem_config`

4.1.1 Function Documentation

4.1.1.1 `get_config()`

```
server_config* get_config (
    void )
```

return server config

Returns

a pointer to the shared memory zone with the configuration of the server inside

4.1.1.2 `get_config_from_file()`

```
int get_config_from_file (
    char * abs_path )
```

open the config file and read it

Parameters

<i>abs_path</i>	absolute path of the application
-----------------	----------------------------------

Returns

0 on success, 1 on error

4.1.1.3 `init_config()`

```
int init_config (
    char * abs_path )
```

Init the configuration of the server

Parameters

<i>abs_path</i>	absolute path of the app
-----------------	--------------------------

Returns

0 on success, 1 on error

4.1.2 Variable Documentation

4.1.2.1 shared_mem_config

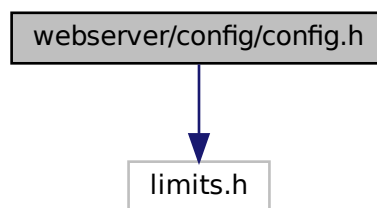
```
server_config* shared_mem_config
```

shared memory zone for access config in the whole application

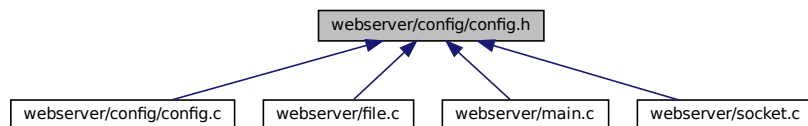
4.2 webserver/config/config.h File Reference

```
#include <limits.h>
```

Include dependency graph for config.h:



This graph shows which files directly or indirectly include this file:



Data Structures

- struct [server_config](#)

Functions

- int [init_config](#) (char *abs_path)
- int [get_config_from_file](#) (char *abs_path)
- [server_config](#) * [get_config](#) (void)

4.2.1 Function Documentation

4.2.1.1 `get_config()`

```
server_config* get_config (
    void )
```

return server config

Returns

a pointer to the shared memory zone with the configuration of the server inside

4.2.1.2 `get_config_from_file()`

```
int get_config_from_file (
    char * abs_path )
```

open the config file and read it

Parameters

<i>abs_path</i>	absolute path of the application
-----------------	----------------------------------

Returns

0 on success, 1 on error

4.2.1.3 `init_config()`

```
int init_config (
    char * abs_path )
```

Init the configuration of the server

Parameters

<i>abs_path</i>	absolute path of the app
-----------------	--------------------------

Returns

0 on success, 1 on error

4.3 `webserver/file.c` File Reference

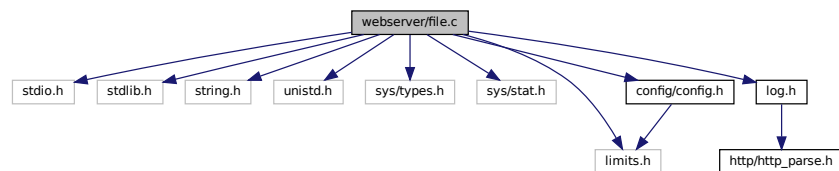
```
#include <stdio.h>
#include <stdlib.h>
```

```

#include <string.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <limits.h>
#include "config/config.h"
#include "log.h"

```

Include dependency graph for file.c:



Functions

- FILE * [check_and_open](#) (const char *target, const char *document_root)
- int [get_file_size](#) (int fd)
- void [copy](#) (FILE *in, FILE *out)
- char * [fgets_or_exit](#) (char *buffer, int size, FILE *stream)
- char * [check_root](#) (char *root)
- char * [get_mime_type](#) (char *name)
- char * [get_app_path](#) (char *argv0)

4.3.1 Function Documentation

4.3.1.1 check_and_open()

```

FILE* check_and_open (
    const char * target,
    const char * document_root )

```

function to check if the file of the target exist, check if we can open it and open it

Parameters

<i>target</i>	the target of the request
<i>document_root</i>	the root path of the website

Returns

a pointer to the opened file

4.3.1.2 check_root()

```
char* check_root (
    char * root )
```

check if we can open the root of the website

Parameters

<i>root</i>	the path to the root
-------------	----------------------

Returns

the root after the check

4.3.1.3 copy()

```
void copy (
    FILE * in,
    FILE * out )
```

copy the content of the file to another

Parameters

<i>in</i>	the file to read
<i>out</i>	the file to copy data

4.3.1.4 fgets_or_exit()

```
char* fgets_or_exit (
    char * buffer,
    int size,
    FILE * stream )
```

read data and if it fail quit the program with error code

Parameters

<i>buffer</i>	buffer to store data
<i>size</i>	the size of data we read
<i>stream</i>	the stream to read data

Returns

the buffer

4.3.1.5 get_app_path()

```
char* get_app_path (
    char * argv0 )
```

return the path of the application

Parameters

<i>argv0</i>	the path of the executable
--------------	----------------------------

Returns

absolute path of the file

4.3.1.6 get_file_size()

```
int get_file_size (
    int fd )
```

find the size of a file

Parameters

<i>fd</i>	the file descriptor for the file to open
-----------	--

Returns

the size of the file

4.3.1.7 get_mime_type()

```
char* get_mime_type (
    char * name )
```

return the mime type of a file

Parameters

<i>name</i>	the name of the file
-------------	----------------------

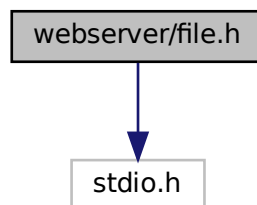
Returns

the mime type of the file

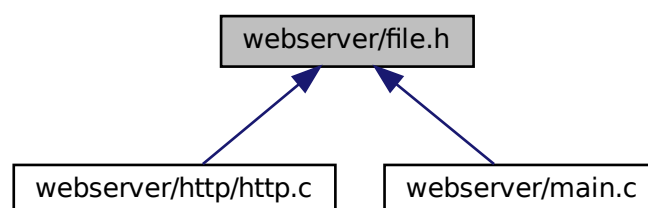
4.4 webserver/file.h File Reference

```
#include <stdio.h>
```

Include dependency graph for file.h:



This graph shows which files directly or indirectly include this file:



Functions

- FILE * [check_and_open](#) (const char *target, const char *document_root)
- int [get_file_size](#) (int fd)
- void [copy](#) (FILE *in, FILE *out)
- char * [fgets_or_exit](#) (char *buffer, int size, FILE *stream)
- char * [check_root](#) (char *root)
- char * [get_mime_type](#) (char *name)
- char * [get_app_path](#) (char *argv0)

4.4.1 Function Documentation

4.4.1.1 `check_and_open()`

```
FILE* check_and_open (
    const char * target,
    const char * document_root )
```

function to check if the file of the target exist, check if we can open it and open it

Parameters

<i>target</i>	the target of the request
<i>document_root</i>	the root path of the website

Returns

a pointer to the opened file

4.4.1.2 `check_root()`

```
char* check_root (
    char * root )
```

check if we can open the root of the website

Parameters

<i>root</i>	the path to the root
-------------	----------------------

Returns

the root after the check

4.4.1.3 `copy()`

```
void copy (
    FILE * in,
    FILE * out )
```

copy the content of the file to another

Parameters

<i>in</i>	the file to read
<i>out</i>	the file to copy data

4.4.1.4 fgets_or_exit()

```
char* fgets_or_exit (
    char * buffer,
    int size,
    FILE * stream )
```

read data and if it fail quit the program with error code

Parameters

<i>buffer</i>	buffer to store data
<i>size</i>	the size of data we read
<i>stream</i>	the stream to read data

Returns

the buffer

4.4.1.5 get_app_path()

```
char* get_app_path (
    char * argv0 )
```

return the path of the application

Parameters

<i>argv0</i>	the path of the executable
--------------	----------------------------

Returns

absolute path of the file

4.4.1.6 get_file_size()

```
int get_file_size (
    int fd )
```


find the size of a file

Parameters

<i>fd</i>	the file descriptor for the file to open
-----------	--

Returns

the size of the file

4.4.1.7 get_mime_type()

```
char* get_mime_type (  
    char * name )
```

return the mime type of a file

Parameters

<i>name</i>	the name of the file
-------------	----------------------

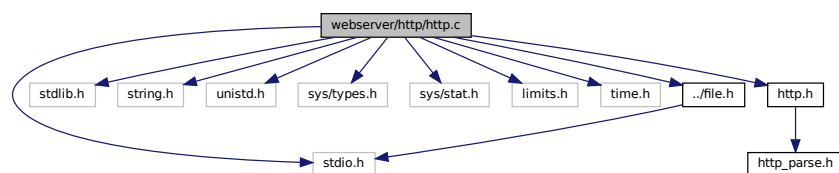
Returns

the mime type of the file

4.5 webserver/http/http.c File Reference

```
#include <stdio.h>  
#include <stdlib.h>  
#include <string.h>  
#include <unistd.h>  
#include <sys/types.h>  
#include <sys/stat.h>  
#include <limits.h>  
#include <time.h>  
#include "http.h"  
#include "../file.h"
```

Include dependency graph for http.c:



Functions

- void [skip_headers](#) (FILE *client, [http_request](#) *request)
- void [send_status](#) (FILE *client, int code, const char *reason_phrase)
- void [send_response](#) (FILE *client, int code, const char *reason_phrase, char *message_body, int size)
- char * [get_date_http_format](#) (void)
- char * [rewrite_target](#) (char *target)

4.5.1 Function Documentation

4.5.1.1 [get_date_http_format\(\)](#)

```
char* get_date_http_format (  
    void )
```

return actual date of the server with the correct format for HTTP response

Returns

well formatted date

4.5.1.2 [rewrite_target\(\)](#)

```
char* rewrite_target (  
    char * target )
```

rewrite the HTTP target within URLs variables

Parameters

<i>target</i>	the target of the request
---------------	---------------------------

Returns

well rewrite target

4.5.1.3 [send_response\(\)](#)

```
void send_response (  
    FILE * client,  
    int code,
```

```
const char * reason_phrase,  
char * message_body,  
int size )
```

function to format the HTTP response

Parameters

<i>client</i>	stream to write the response
<i>code</i>	the HTTP code of the response
<i>reason_phrase</i>	the reason phrase of the response
<i>message_body</i>	the body of the response
<i>size</i>	the size of the response body

4.5.1.4 send_status()

```
void send_status (  
    FILE * client,  
    int code,  
    const char * reason_phrase )
```

send the status of the response

Parameters

<i>client</i>	stream to send data
<i>code</i>	HTTP code of the response
<i>reason_phrase</i>	HTTP response reason phrase

4.5.1.5 skip_headers()

```
void skip_headers (  
    FILE * client,  
    http_request * request )
```

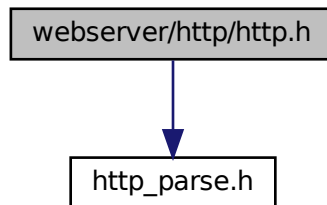
ignore headers of yhe requests

Parameters

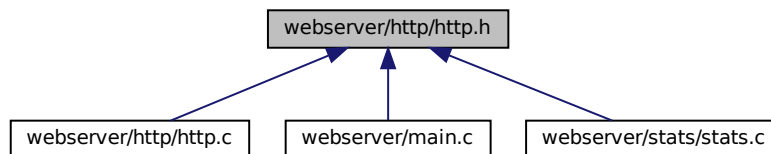
<i>client</i>	request stream
<i>request</i>	request we parse

4.6 webservice/http/http.h File Reference

```
#include "http_parse.h"
Include dependency graph for http.h:
```



This graph shows which files directly or indirectly include this file:



Functions

- void [skip_headers](#) (FILE *client, [http_request](#) *request)
- void [send_status](#) (FILE *client, int code, const char *reason_phrase)
- void [send_response](#) (FILE *client, int code, const char *reason_phrase, char *message_body, int size)
- char * [get_date_http_format](#) (void)
- char * [rewrite_target](#) (char *target)

4.6.1 Function Documentation

4.6.1.1 [get_date_http_format\(\)](#)

```
char* get_date_http_format (
    void )
```

return actual date of the server with the correct format for HTTP response

Returns

well formatted date

4.6.1.2 `rewrite_target()`

```
char* rewrite_target (
    char * target )
```

rewrite the HTTP target within URLs variables

Parameters

<i>target</i>	the target of the request
---------------	---------------------------

Returns

well rewrite target

4.6.1.3 `send_response()`

```
void send_response (
    FILE * client,
    int code,
    const char * reason_phrase,
    char * message_body,
    int size )
```

function to format the HTTP response

Parameters

<i>client</i>	stream to write the response
<i>code</i>	the HTTP code of the response
<i>reason_phrase</i>	the reason phrase of the response
<i>message_body</i>	the body of the response
<i>size</i>	the size of the response body

4.6.1.4 `send_status()`

```
void send_status (
    FILE * client,
    int code,
    const char * reason_phrase )
```

send the status of the response

Parameters

<i>client</i>	stream to send data
<i>code</i>	HTTP code of the response
<i>reason_phrase</i>	HTTP response reason phrase

4.6.1.5 skip_headers()

```
void skip_headers (
    FILE * client,
    http_request * request )
```

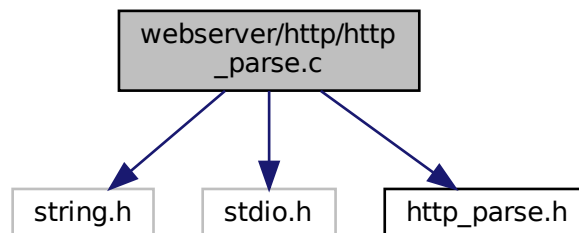
ignore headers of yhe requests

Parameters

<i>client</i>	request stream
<i>request</i>	request we parse

4.7 webserver/http/http_parse.c File Reference

```
#include <string.h>
#include <stdio.h>
#include "http_parse.h"
Include dependency graph for http_parse.c:
```



Macros

- `#define min(a, b) ((a) < (b) ? (a) : (b))`
- `#define in_range(a, b, c) ((a) < (b) ? 0 : ((a) > (c) ? 0 : 1))`

Functions

- `int parse_http_request (const char *request_line, http_request *request)`

4.7.1 Macro Definition Documentation

4.7.1.1 in_range

```
#define in_range(  
    a,  
    b,  
    c ) ((a) < (b) ? 0 : ((a) > (c) ? 0 : 1))
```

find if a number is in two others

4.7.1.2 min

```
#define min(  
    a,  
    b ) ((a) < (b) ? (a) : (b))
```

find the minimum value between two numbers

4.7.2 Function Documentation

4.7.2.1 parse_http_request()

```
int parse_http_request (  
    const char * request_line,  
    http_request * request )
```

function to parse the request

Parameters

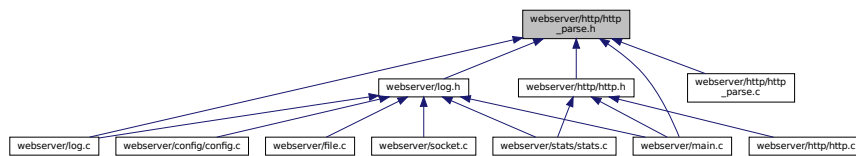
<i>request_line</i>	main request line
<i>request</i>	request to parse

Returns

1 on success, 0 on error

4.8 webservers/http/http_parse.h File Reference

This graph shows which files directly or indirectly include this file:

**Data Structures**

- struct [http_request](#)

Macros

- #define [MAX_TARGET_SIZE](#) 1024

Enumerations

- enum [http_method](#) { [HTTP_GET](#), [HTTP_HEAD](#), [HTTP_UNSUPPORTED](#) }

Functions

- int [parse_http_request](#) (const char *request_line, [http_request](#) *request)

4.8.1 Macro Definition Documentation**4.8.1.1 MAX_TARGET_SIZE**

```
#define MAX_TARGET_SIZE 1024
```

4.8.2 Enumeration Type Documentation**4.8.2.1 http_method**

```
enum http\_method
```

Method supported by the parser

Enumerator

HTTP_GET	GET http method
HTTP_HEAD	HEAD http method
HTTP_UNSUPPORTED	the method is not supported

4.8.3 Function Documentation

4.8.3.1 parse_http_request()

```
int parse_http_request (
    const char * request_line,
    http_request * request )
```

Parses a http request line.

Parameters

<i>in</i>	request_line the line to parse (as a null terminated string)
<i>out</i>	request a valid pointer to a http_request that will be filled by the function

Returns

-1 if error and 0 on success. If the error is an unsupported http method, then the method field of request will be set to HTTP_UNSUPPORTED

function to parse the request

Parameters

<i>request_line</i>	main request line
<i>request</i>	request to parse

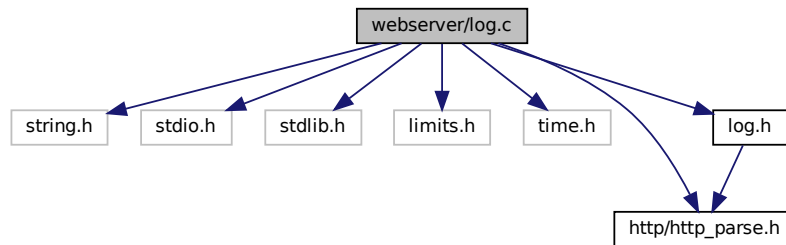
Returns

1 on success, 0 on error

4.9 webserver/log.c File Reference

```
#include <string.h>
#include <stdio.h>
#include <stdlib.h>
#include <limits.h>
#include <time.h>
```

```
#include "http/http_parse.h"
#include "log.h"
Include dependency graph for log.c:
```



Functions

- void [create_requests_logs_file](#) (char *path)
- void [create_errors_logs_file](#) (char *path)
- void [write_request](#) (FILE *log_file, [http_request](#) request, int code)
- void [write_error](#) (FILE *log_file, char *error)
- FILE * [get_log_requests](#) (void)
- FILE * [get_log_errors](#) (void)

Variables

- FILE * [log_requests](#)
- FILE * [log_errors](#)

4.9.1 Function Documentation

4.9.1.1 [create_errors_logs_file\(\)](#)

```
void create_errors_logs_file (
    char * path )
```

init the errors log file

Parameters

<i>path</i>	the path to the log directory
-------------	-------------------------------

4.9.1.2 create_requests_logs_file()

```
void create_requests_logs_file (
    char * path )
```

init the requests log file

Parameters

<i>path</i>	the path to the log directory
-------------	-------------------------------

4.9.1.3 get_log_errors()

```
FILE* get_log_errors (
    void )
```

return a file descriptor to the error log file

Returns

the file descriptor

4.9.1.4 get_log_requests()

```
FILE* get_log_requests (
    void )
```

return a file descriptor to the requests log file

Returns

the file descriptor

4.9.1.5 write_error()

```
void write_error (
    FILE * log_file,
    char * error )
```

function to write an error in the log file

Parameters

<i>log_file</i>	the log file
<i>request</i>	the error to write

4.9.1.6 write_request()

```
void write_request (
    FILE * log_file,
    http_request request,
    int code )
```

function to write a request in the log file

Parameters

<i>log_file</i>	the log file
<i>request</i>	the request to write
<i>code</i>	the HTTP code of the request

4.9.2 Variable Documentation**4.9.2.1 log_errors**

```
FILE* log_errors
```

the log file for errors

4.9.2.2 log_requests

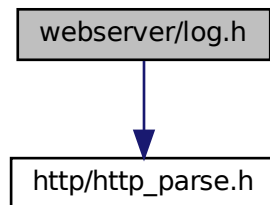
```
FILE* log_requests
```

the log file for requests

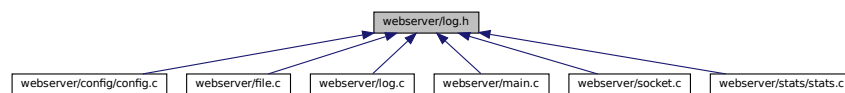
4.10 webserver/log.h File Reference

```
#include "http/http_parse.h"
```

Include dependency graph for log.h:



This graph shows which files directly or indirectly include this file:



Functions

- void [create_requests_logs_file](#) (char *path)
- void [create_errors_logs_file](#) (char *path)
- void [write_request](#) (FILE *log_file, [http_request](#) request, int code)
- void [write_error](#) (FILE *log_file, char *error)
- FILE * [get_log_requests](#) (void)
- FILE * [get_log_errors](#) (void)

Variables

- char [client_ip](#) [20]

4.10.1 Function Documentation

4.10.1.1 create_errors_logs_file()

```
void create_errors_logs_file (
    char * path )
```

init the errors log file

Parameters

<i>path</i>	the path to the log directory
-------------	-------------------------------

4.10.1.2 create_requests_logs_file()

```
void create_requests_logs_file (  
    char * path )
```

init the requests log file

Parameters

<i>path</i>	the path to the log directory
-------------	-------------------------------

4.10.1.3 get_log_errors()

```
FILE* get_log_errors (  
    void )
```

return a file descriptor to the error log file

Returns

the file descriptor

4.10.1.4 get_log_requests()

```
FILE* get_log_requests (  
    void )
```

return a file descriptor to the requests log file

Returns

the file descriptor

4.10.1.5 write_error()

```
void write_error (  
    FILE * log_file,  
    char * error )
```

function to write an error in the log file

Parameters

<i>log_file</i>	the log file
<i>request</i>	the error to write

4.10.1.6 write_request()

```
void write_request (
    FILE * log_file,
    http_request request,
    int code )
```

function to write a request in the log file

Parameters

<i>log_file</i>	the log file
<i>request</i>	the request to write
<i>code</i>	the HTTP code of the request

4.10.2 Variable Documentation**4.10.2.1 client_ip**

```
char client_ip[20]
```

the ip address of the client

4.11 webserver/main.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <sys/socket.h>
#include <sys/wait.h>
#include <netinet/in.h>
#include <string.h>
#include <unistd.h>
#include <signal.h>
#include <limits.h>
#include <semaphore.h>
#include <arpa/inet.h>
#include "socket.h"
```

```
#include "http/http_parse.h"
#include "stats/stats.h"
#include "config/config.h"
#include "http/http.h"
#include "file.h"
#include "log.h"
```

Include dependency graph for main.c:



Functions

- void [init_signals](#) (void)
- void [respond_client](#) (int socket_client)
- void [child_handler](#) (void)
- int [main](#) (int argc, char *argv[])

Variables

- char [root](#) [PATH_MAX]

4.11.1 Function Documentation

4.11.1.1 child_handler()

```
void child_handler (
    void )
```

function to dismiss zombies process

4.11.1.2 init_signals()

```
void init_signals (
    void )
```

function to ignore SIGPIPE signal

4.11.1.3 main()

```
int main (
    int argc,
    char * argv[ ] )
```

the main function of the program

Parameters

<i>argc</i>	arguments counter
<i>argv</i>	arguments array

Returns

0 on success, positive value on error

4.11.1.4 respond_client()

```
void respond_client (
    int socket_client )
```

function to respond to the client

Parameters

<i>socket_client</i>	the socket client
----------------------	-------------------

4.11.2 Variable Documentation**4.11.2.1 root**

```
char root[PATH_MAX]
```

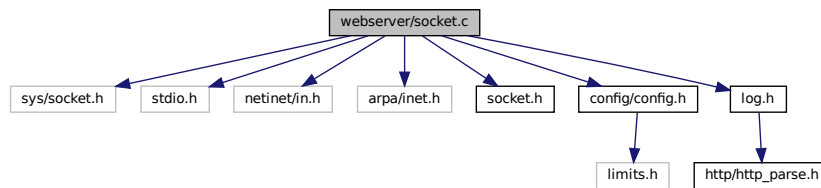
the root directory of the application

4.12 webserver/socket.c File Reference

```
#include <sys/socket.h>
#include <stdio.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include "socket.h"
#include "config/config.h"
```

```
#include "log.h"
```

Include dependency graph for socket.c:



Functions

- int [create_server](#) (int port)

4.12.1 Function Documentation

4.12.1.1 create_server()

```
int create_server (  
    int port )
```

creation of the server with the port we want to listen

Parameters

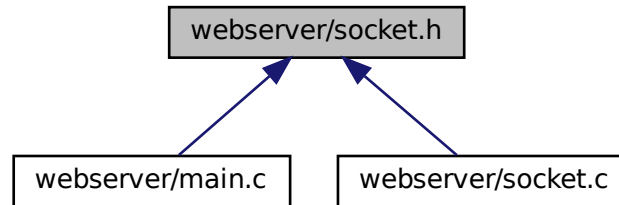
<i>port</i>	the port to listen
-------------	--------------------

Returns

the server socket

4.13 webserver/socket.h File Reference

This graph shows which files directly or indirectly include this file:



Functions

- int [create_server](#) (int port)

4.13.1 Function Documentation

4.13.1.1 create_server()

```
int create_server (  
    int port )
```

creation of the server with the port we want to listen

Parameters

<i>port</i>	the port to listen
-------------	--------------------

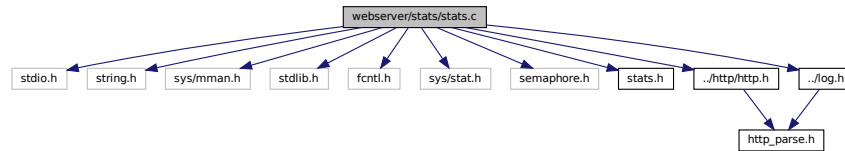
Returns

the server socket

4.14 webserver/stats/stats.c File Reference

```
#include <stdio.h>  
#include <string.h>  
#include <sys/mman.h>  
#include <stdlib.h>
```

```
#include <fcntl.h>
#include <sys/stat.h>
#include <semaphore.h>
#include "stats.h"
#include "../http/http.h"
#include "../log.h"
Include dependency graph for stats.c:
```



Functions

- void [send_stats](#) (FILE *client)
- void [init_stats](#) (void)
- [web_stats](#) * [get_stats](#) (void)

Variables

- [web_stats](#) * [shared_memory](#)

4.14.1 Function Documentation

4.14.1.1 [get_stats\(\)](#)

```
web\_stats* get\_stats (
    void )
```

return the shared memory zone of the stats

Returns

a pointer to the server stats

4.14.1.2 [init_stats\(\)](#)

```
void init\_stats (
    void )
```

init the server stats, the semaphore and the shared memory

4.14.1.3 [send_stats\(\)](#)

```
void send\_stats (
    FILE * client )
```

function who display stats of the server in html

Parameters

<i>client</i>	the socket of the client
---------------	--------------------------

4.14.2 Variable Documentation

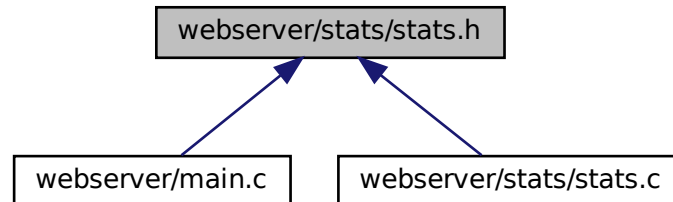
4.14.2.1 shared_memory

`web_stats*` `shared_memory`

shared memory for the stats

4.15 webserver/stats/stats.h File Reference

This graph shows which files directly or indirectly include this file:



Data Structures

- struct `web_stats`

Functions

- void `send_stats` (FILE *`client`)
- void `init_stats` (void)
- `web_stats *` `get_stats` (void)

Variables

- `sem_t *` `shared_semaphore`

4.15.1 Function Documentation

4.15.1.1 `get_stats()`

```
web_stats* get_stats (
    void )
```

return the shared memory zone of the stats

Returns

a pointer to the server stats

4.15.1.2 `init_stats()`

```
void init_stats (
    void )
```

init the server stats, the semaphore and the shared memory

4.15.1.3 `send_stats()`

```
void send_stats (
    FILE * client )
```

function who display stats of the server in html

Parameters

<i>client</i>	the socket of the client
---------------	--------------------------

4.15.2 Variable Documentation

4.15.2.1 `shared_semaphore`

```
sem_t* shared_semaphore
```

semaphore to avoid concurrent access to the stats

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