1.Скачиваем библиотеку boost с помощью wget:

$wget -P /Downloads https://sourceforge.net/projects/boost/files/boost/1.69.0/boost_1_69_0.tar.gz

2.Разархивируем boost в директорию ~/boost_1_69_0:

$tar -C ~/ -x ~/Downloads/boost_1_69_0.tar.gz

3.Подсчёт файлов в директории ~/boost_1_69_0/ не включая вложенные директории:

$tree boost_1_69_0 -L 1

6 directories, 12 files

4.Подсчёт файлов в директории ~/boost_1_69_0/ включая вложенные директории (скрытые тоже считаем, на всякий случай):

$tree boost_1_69_0 -a

5637 directories, 61191 files

5.Подсчёт кол-ва заголовочныйх файлов и файлов .cpp, подсчёт всех остальных файлов:

$tree boost_1_69_0 -P "*.cpp|*.hpp"

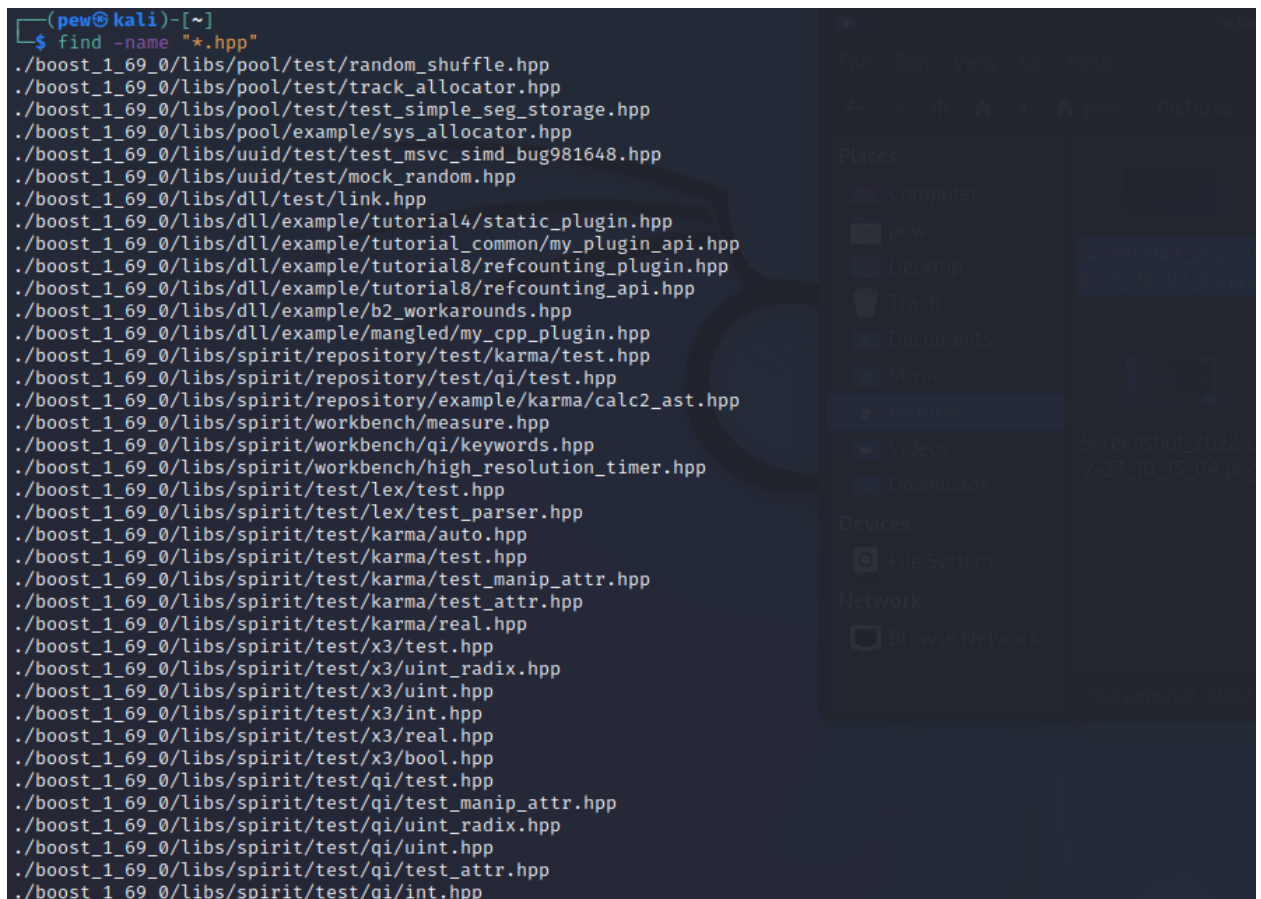6284 directories, 28686 files

$tree boost_1_69_0 -I "*.cpp|*.hpp"

5637 directories, 32505 files

6.Полный путь до файла any.hpp внутри библиотеки boots:

$tree boost_1_69_0 -f -P "*.hpp"

Или

$find —name "*.hpp"

```
  ┌──(pew㊙ kali)-[~]
  └─$ find -name "*.hpp"
./boost_1_69_0/libs/pool/test/random_shuffle.hpp
./boost_1_69_0/libs/pool/test/track_allocator.hpp
./boost_1_69_0/libs/pool/test/test_simple_seg_storage.hpp
./boost_1_69_0/libs/pool/example/sys_allocator.hpp
./boost_1_69_0/libs/uuid/test/test_msvc_simd_bug981648.hpp
./boost_1_69_0/libs/uuid/test/mock_random.hpp
./boost_1_69_0/libs/dll/test/link.hpp
./boost_1_69_0/libs/dll/example/tutorial4/static_plugin.hpp
./boost_1_69_0/libs/dll/example/tutorial_common/my_plugin_api.hpp
./boost_1_69_0/libs/dll/example/tutorial8/refcounting_plugin.hpp
./boost_1_69_0/libs/dll/example/tutorial8/refcounting_api.hpp
./boost_1_69_0/libs/dll/example/b2_workarounds.hpp
./boost_1_69_0/libs/dll/example/mangled/my_cpp_plugin.hpp
./boost_1_69_0/libs/spirit/repository/test/karma/test.hpp
./boost_1_69_0/libs/spirit/repository/test/qi/test.hpp
./boost_1_69_0/libs/spirit/repository/example/karma/calc2_ast.hpp
./boost_1_69_0/libs/spirit/workbench/measure.hpp
./boost_1_69_0/libs/spirit/workbench/qi/keywords.hpp
./boost_1_69_0/libs/spirit/workbench/high_resolution_timer.hpp
./boost_1_69_0/libs/spirit/test/lex/test.hpp
./boost_1_69_0/libs/spirit/test/lex/test_parser.hpp
./boost_1_69_0/libs/spirit/test/karma/auto.hpp
./boost_1_69_0/libs/spirit/test/karma/test.hpp
./boost_1_69_0/libs/spirit/test/karma/test_manip_attr.hpp
./boost_1_69_0/libs/spirit/test/karma/test_attr.hpp
./boost_1_69_0/libs/spirit/test/karma/real.hpp
./boost_1_69_0/libs/spirit/test/x3/test.hpp
./boost_1_69_0/libs/spirit/test/x3/uint_radix.hpp
./boost_1_69_0/libs/spirit/test/x3/uint.hpp
./boost_1_69_0/libs/spirit/test/x3/int.hpp
./boost_1_69_0/libs/spirit/test/x3/real.hpp
./boost_1_69_0/libs/spirit/test/x3/bool.hpp
./boost_1_69_0/libs/spirit/test/qi/test.hpp
./boost_1_69_0/libs/spirit/test/qi/test_manip_attr.hpp
./boost_1_69_0/libs/spirit/test/qi/uint_radix.hpp
./boost_1_69_0/libs/spirit/test/qi/uint.hpp
./boost_1_69_0/libs/spirit/test/qi/test_attr.hpp
./boost_1_69_0/libs/spirit/test/qi/int.hpp
```

7.Вывод в консоль файлов, где упомянается boost::asio:

$grep -rl "boost::asio" ~/boost_1_69_0

```
  ┌──(pew㉿kali)-[~]
  └─$ grep -rl "boost::asio" ~/boost_1_69_0
/home/pew/boost_1_69_0/libs/coroutine2/doc/coro.qbk
/home/pew/boost_1_69_0/libs/coroutine2/doc/motivation.qbk
/home/pew/boost_1_69_0/libs/fiber/examples/asio/exchange.cpp
/home/pew/boost_1_69_0/libs/fiber/examples/asio/ps/subscriber.cpp
/home/pew/boost_1_69_0/libs/fiber/examples/asio/ps/publisher.cpp
/home/pew/boost_1_69_0/libs/fiber/examples/asio/ps/server.cpp
/home/pew/boost_1_69_0/libs/fiber/examples/asio/round_robin.hpp
/home/pew/boost_1_69_0/libs/fiber/examples/asio/autoecho.cpp
/home/pew/boost_1_69_0/libs/fiber/doc/asio.qbk
/home/pew/boost_1_69_0/libs/fiber/doc/fibers.qbk
/home/pew/boost_1_69_0/libs/fiber/doc/integration.qbk
/home/pew/boost_1_69_0/libs/fiber/doc/callbacks.qbk
/home/pew/boost_1_69_0/libs/coroutine/doc/coro.qbk
/home/pew/boost_1_69_0/libs/coroutine/doc/html/coroutine/motivation.html
/home/pew/boost_1_69_0/libs/coroutine/doc/motivation.qbk
/home/pew/boost_1_69_0/libs/beast/test/extras/include/boost/beast/test/yield_to.hpp
/home/pew/boost_1_69_0/libs/beast/test/extras/include/boost/beast/test/websocket.hpp
/home/pew/boost_1_69_0/libs/beast/test/extras/include/boost/beast/test/sig_wait.hpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffers_adapter.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffers_suffix.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/multi_buffer.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/flat_static_buffer.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffer.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/flat_buffer.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffered_read_stream.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/bind_handler.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffer_test.hpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/static_buffer.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffers_cat.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/type_traits.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/read_size.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/core/buffers_prefix.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/experimental/timeout_service.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/experimental/timeout_socket.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/experimental/icy_stream.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/experimental/flat_stream.cpp
/home/pew/boost_1_69_0/libs/beast/test/beast/websocket/test.hpp
/home/pew/boost_1_69_0/libs/beast/test/beast/websocket/read1.cpp
```

8.Компиляция boost:

$cd boost_1_69_0

$./bootstrap.sh

$./b2

9.Перенос всех скомпилированных библиотек в директорию ~/boost-libs:

$mv stage/lib ~/boost-libs

10.Подсчёт размера каждого файла директории:

$tree -s boost-libs

или

$ls boot-libs/lib –s

```
┌──(pew㊉kali)-[~]
└─$ tree -s boost-libs
[        4096]  boost-libs
└── [        4096]  lib
    ├── [        2490]  libboost_atomic.a
    ├── [          25]  libboost_atomic.so → libboost_atomic.so.1.69.0
    ├── [       15544]  libboost_atomic.so.1.69.0
    ├── [      236422]  libboost_chrono.a
    ├── [          25]  libboost_chrono.so → libboost_chrono.so.1.69.0
    ├── [       57840]  libboost_chrono.so.1.69.0
    ├── [      148568]  libboost_container.a
    ├── [          28]  libboost_container.so → libboost_container.so.1.69.0
    ├── [      105928]  libboost_container.so.1.69.0
    ├── [       20168]  libboost_context.a
    ├── [          26]  libboost_context.so → libboost_context.so.1.69.0
    ├── [       23952]  libboost_context.so.1.69.0
    ├── [      345680]  libboost_contract.a
    ├── [          27]  libboost_contract.so → libboost_contract.so.1.69.0
    ├── [      180608]  libboost_contract.so.1.69.0
    ├── [      185366]  libboost_coroutine.a
    ├── [          28]  libboost_coroutine.so → libboost_coroutine.so.1.69.0
    ├── [       83992]  libboost_coroutine.so.1.69.0
    ├── [      150090]  libboost_date_time.a
    ├── [          28]  libboost_date_time.so → libboost_date_time.so.1.69.0
    ├── [       85736]  libboost_date_time.so.1.69.0
    ├── [        1526]  libboost_exception.a
    ├── [      238100]  libboost_fiber.a
    ├── [          24]  libboost_fiber.so → libboost_fiber.so.1.69.0
    ├── [       97928]  libboost_fiber.so.1.69.0
    ├── [      413216]  libboost_filesystem.a
    ├── [          29]  libboost_filesystem.so → libboost_filesystem.so.1.69.0
    ├── [      148136]  libboost_filesystem.so.1.69.0
    ├── [      891244]  libboost_graph.a
    ├── [          24]  libboost_graph.so → libboost_graph.so.1.69.0
    ├── [      413440]  libboost_graph.so.1.69.0
    ├── [      286526]  libboost_iostreams.a
    ├── [          28]  libboost_iostreams.so → libboost_iostreams.so.1.69.0
    ├── [      133304]  libboost_iostreams.so.1.69.0
    ├── [     3428072]  libboost_locale.a
    ├── [          25]  libboost_locale.so → libboost_locale.so.1.69.0
```

```
┌──(pew㊉kali)-[~]
└─$ ls boost-libs/lib -s
total 53852
   4 libboost_atomic.a                 0 libboost_log_setup.so           1288 libboost_regex.so.1.69.0
   0 libboost_atomic.so             1124 libboost_log_setup.so.1.69.0    1168 libboost_serialization.a
  16 libboost_atomic.so.1.69.0         0 libboost_log.so                    0 libboost_serialization.so
 232 libboost_chrono.a              1320 libboost_log.so.1.69.0           464 libboost_serialization.so.1.69.0
   0 libboost_chrono.so              576 libboost_math_c99.a               24 libboost_stacktrace_addr2line.a
  60 libboost_chrono.so.1.69.0      488 libboost_math_c99f.a               0 libboost_stacktrace_addr2line.so
 148 libboost_container.a              0 libboost_math_c99f.so             32 libboost_stacktrace_addr2line.so.1.69.0
   0 libboost_container.so           88 libboost_math_c99f.so.1.69.0       20 libboost_stacktrace_backtrace.a
 104 libboost_container.so.1.69.0   500 libboost_math_c99l.a               0 libboost_stacktrace_backtrace.so
  20 libboost_context.a               0 libboost_math_c99l.so             92 libboost_stacktrace_backtrace.so.1.69.0
   0 libboost_context.so             84 libboost_math_c99l.so.1.69.0       16 libboost_stacktrace_basic.a
  24 libboost_context.so.1.69.0        0 libboost_math_c99.so               0 libboost_stacktrace_basic.so
 340 libboost_contract.a            108 libboost_math_c99.so.1.69.0        20 libboost_stacktrace_basic.so.1.69.0
   0 libboost_contract.so          2824 libboost_math_tr1.a                 4 libboost_stacktrace_noop.a
 180 libboost_contract.so.1.69.0   2744 libboost_math_tr1f.a               0 libboost_stacktrace_noop.so
 184 libboost_coroutine.a             0 libboost_math_tr1f.so             16 libboost_stacktrace_noop.so.1.69.0
   0 libboost_coroutine.so          548 libboost_math_tr1f.so.1.69.0       4 libboost_system.a
  84 libboost_coroutine.so.1.69.0  2792 libboost_math_tr1l.a               0 libboost_system.so
 148 libboost_date_time.a             0 libboost_math_tr1l.so             16 libboost_system.so.1.69.0
   0 libboost_date_time.so          544 libboost_math_tr1l.so.1.69.0    2308 libboost_test_exec_monitor.a
  84 libboost_date_time.so.1.69.0     0 libboost_math_tr1.so             448 libboost_thread.a
   4 libboost_exception.a           552 libboost_math_tr1.so.1.69.0        0 libboost_thread.so
 236 libboost_fiber.a                96 libboost_numpy39.a               220 libboost_thread.so.1.69.0
   0 libboost_fiber.so                0 libboost_numpy39.so               56 libboost_timer.a
  96 libboost_fiber.so.1.69.0        68 libboost_numpy39.so.1.69.0         0 libboost_timer.so
 404 libboost_filesystem.a          212 libboost_prg_exec_monitor.a       48 libboost_timer.so.1.69.0
   0 libboost_filesystem.so           0 libboost_prg_exec_monitor.so     180 libboost_type_erasure.a
 148 libboost_filesystem.so.1.69.0  112 libboost_prg_exec_monitor.so.1.69.0  0 libboost_type_erasure.so
 872 libboost_graph.a              1596 libboost_program_options.a       104 libboost_type_erasure.so.1.69.0
   0 libboost_graph.so                0 libboost_program_options.so     2292 libboost_unit_test_framework.a
 404 libboost_graph.so.1.69.0       676 libboost_program_options.so.1.69.0  0 libboost_unit_test_framework.so
 280 libboost_iostreams.a           652 libboost_python39.a              928 libboost_unit_test_framework.so.1.69.0
   0 libboost_iostreams.so            0 libboost_python39.so            4612 libboost_wave.a
 132 libboost_iostreams.so.1.69.0   336 libboost_python39.so.1.69.0        0 libboost_wave.so
3348 libboost_locale.a               80 libboost_random.a               1516 libboost_wave.so.1.69.0
   0 libboost_locale.so               0 libboost_random.so               772 libboost_wserialization.a
1200 libboost_locale.so.1.69.0       56 libboost_random.so.1.69.0          0 libboost_wserialization.so
```

11.Вывод 10-ти самых "тяжёлых":

$ls boot-libs/lib -s –S | head

```
┌──(pew㊙kali)-[~]
└─$ ls boost-libs/lib -s -S | head
total 53852
4612 libboost_wave.a
4276 libboost_log.a
3348 libboost_locale.a
3120 libboost_regex.a
2824 libboost_math_tr1.a
2792 libboost_math_tr1l.a
2744 libboost_math_tr1f.a
2556 libboost_log_setup.a
2308 libboost_test_exec_monitor.a

┌──(pew㊙kali)-[~]
└─$
```