

8006 Asn3 - Testing and Usage

Let's hope this works, punk

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Building and Running

Prerequisites:

- CMake is installed
- Python3 is installed
- C11 compliant compiler is installed

Step 1

Generate makefile by running 'cmake .'

Expected Result

```
16:15:12(master)isaac@isaacbox:8006-asn3$ cmake ./
-- The C compiler identification is GNU 7.3.0
-- The CXX compiler identification is GNU 7.3.0
-- Check for working C compiler: /usr/bin/cc
-- Check for working C compiler: /usr/bin/cc -- works
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Detecting C compile features
-- Detecting C compile features - done
-- Check for working CXX compiler: /usr/bin/c++
-- Check for working CXX compiler: /usr/bin/c++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Detecting CXX compile features
-- Detecting CXX compile features - done
-- Looking for pthread.h
-- Looking for pthread.h - found
-- Looking for pthread_create
-- Looking for pthread_create - not found
-- Check if compiler accepts -pthread
-- Check if compiler accepts -pthread - yes
-- Found Threads: TRUE
-- Found Curses: /usr/lib/libcurses.so
-- Configuring done
-- Generating done
-- Build files have been written to: /home/isaac/code/8006-asn3
16:15:18(master)isaac@isaacbox:8006-asn3$ |
```

Step 2

Build project running 'make'

Expected Result

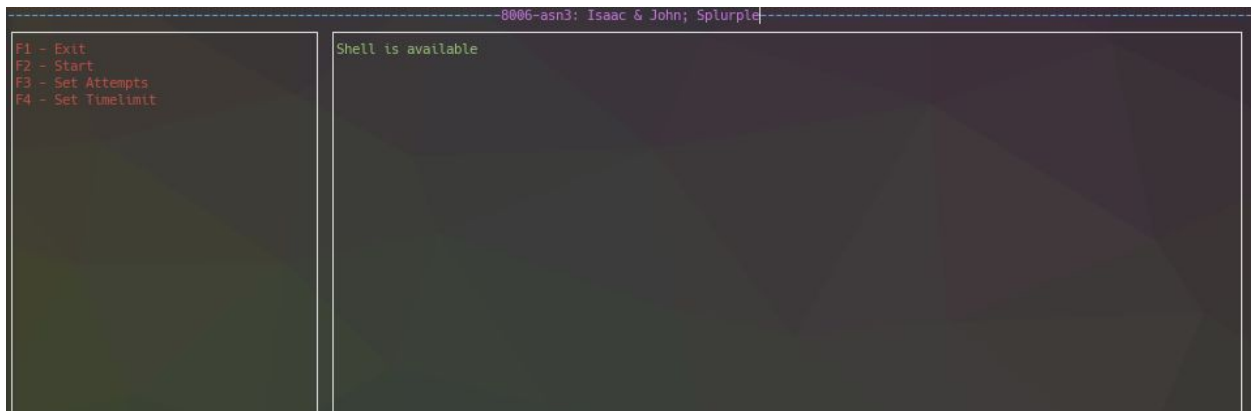
```
16:15:18(master)isaac@isaacbox:8006-asn3$ make
Scanning dependencies of target 8006-asn3
[ 16%] Building C object CMakeFiles/8006-asn3.dir/src/epoll.c.o
[ 33%] Building C object CMakeFiles/8006-asn3.dir/src/inotify.c.o
[ 50%] Building C object CMakeFiles/8006-asn3.dir/src/iptables.c.o
[ 66%] Building C object CMakeFiles/8006-asn3.dir/src/main.c.o
[ 83%] Building C object CMakeFiles/8006-asn3.dir/src/ui.c.o
[100%] Linking C executable bin/8006-asn3
[100%] Built target 8006-asn3
16:15:41(master)isaac@isaacbox:8006-asn3$ |
```

Step 3

Run the project with `sudo ./bin/8006-asn3`

Expected Result

You are greeted with a UI with the available commands on the left



Testing Grid

Setup	Test	Result
1. Run the program with defaults	1. Fail to log in three times	IP is banned for 24 hours
1. Run the program with defaults 2. Set the attempt limit to 1 3. Set the block timeout to 10 seconds	1. Fail to log in 2. Attempt to login and get blocked 3. Wait 10 seconds 4. Login correctly	After the timeout of 10 seconds has occurred login is successful
1. Run the program with defaults	1. Login successfully	No banning action is taken
1. Run the program with defaults	1. Fail to login twice 2. Login successfully	No banning action is taken

Test UI mode

Purpose

Run the program in an interactive ui mode to see when IPs are banned and unbanned.

Step 1

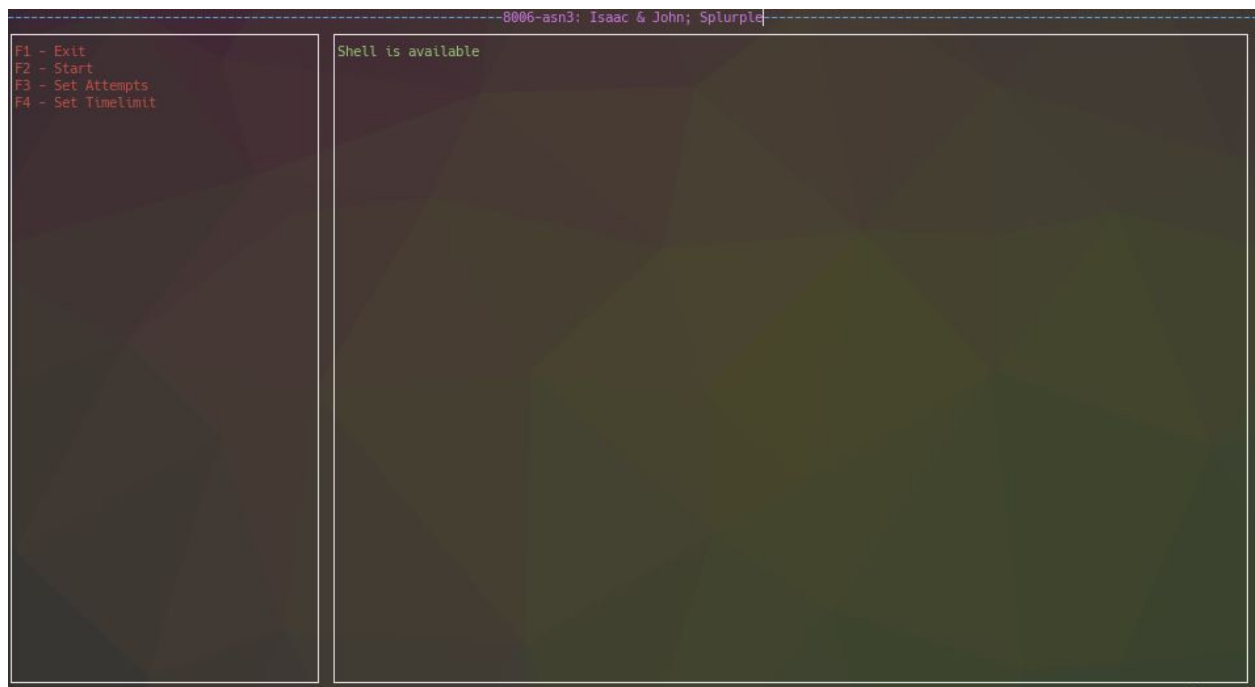
Run the program with 'sudo ./bin/8005-asn3'

Expected Result

Without sudo it will not be able to run

```
16:22:59(master)isaac@isaacbox:8006-asn3$ ./bin/8006-asn3
/home/isaac/code/8006-asn3/src/main.c::main::85
    setuid(0) != -1: Operation not permitted
16:23:01(master)isaac@isaacbox:8006-asn3$ |
```

With sudo a UI will render



Step 2

Once the UI is running pressing the function keys will allow you to change the defaults. Press F1 when you are done to start the daemon.

Expected Result

```
-----8006-asn3: Isaac & John; Splurple-----
F1 - Exit
F2 - Start
F3 - Set Attempts
F4 - Set Timelimit

Shell is available
Enter Attempt Limit:
3
Enter Timelimit:
40000
```

Step 3

Upon starting it ssh into the machine running the program three times unsuccessfully to trigger a ban

Step 4

Wait for the timeout as will be indicated by the *unbanning IP* message and ssh in with the correct information.

Expected Result

```
-----8006-asn3: Isaac & John; Splurple-----
F1 - Exit
F2 - Start
F3 - Set Attempts
F4 - Set Timelimit

Shell is available
Enter Attempt Limit:
3
Enter Timelimit:
5
Starting...
Banning 192.168.0.15
Unbanning 192.168.0.15
```

Test Daemon mode

Purpose

Run the program as an uninteractive daemon.

Step 1

Run program with 'sudo ./bin/8005-asn3 -d' to start daemonized

Expected Result

The daemon will launch and you will be returned to the terminal

```
16:55:57(master)isaac@isaacbox:8006-asn3$ sudo ./bin/8006-asn3 -d
[sudo] password for isaac:
16:59:33(master)isaac@isaacbox:8006-asn3$ |
```

While this process shows no output the banning and unbanning process works the same as with the UI based mode.