# SnortALog v2.1.0

Technical Documentation
http://jeremy.chartier.free.fr/snortalog/

| Version History | | |
|---|---|---|
| Version | Date | Comments |
| V1.0 | 2003/12/16 | Main Documentation |
| | | |
| | | |

# Table Contents

# 1 Introduction

The purpose of this paper is to provide complete documentation for the installation, configuration and use of Snortalog.

This guide is most definitely not the end-all or the be-all, but it will tell you how to setup the program and to get it running in a relatively quick fashion.

# 2 Additional Information

If you have questions, comments, corrections, additions or whatever else please let me know. I can be reached via email at jeremy.chartier@free.fr and I like hearing people.

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# 4 What is Snortalog

## 4.1 Overview

**Snortalog** is a powerfull perl program that summarizes Snort and Firewalls logs making it easy to view any attacks against your network.

Snortalog works with all versions of SNORT and is the only perl program which can analyse snort's logs in all formats (Syslog, Fast and Full alerts).

Also, it is able to summarize FW-1 (4.1 and NG), Netfilter and IPFilter logs in a similar way.

## 4.2 Possibilities

| Available | Coming soon |
|---|---|
| • Create HTML and text reports<br>• Works with Syslog, Fast and Full alerts<br>• Works with all preprocessor (spp_stream4, spp_portscan, spp_decoder ...)<br>• Can specify order (ascending or decscending)<br>• Can specify the number of occurences to view<br>• Can resolve IP addresses and domains<br>• Has the possibility to link the signature to the web reference attack description<br>• Add colors for best visibility<br>• Works with -I snort's option to specify an interface and add report<br>• Use a specific plugin to generate your owns reference's rules<br>• Generate GIF, PNG or JPG graph in HTML output<br>• Graphic User Interface<br>• Works with FW-1 (4.1 and NG), IPFilter and Netfilter logs (experimental)<br>• Possibility to generate PDF output on the fly<br>• Possibility to do filtering (e.g if you only want src logs) | • Soon to work on Windows platform<br>• Will work with other logs like PIX, Netscreen, Brick |

# 5 Why a Perl Program ?

There are several reasons why I choose to develop my program in perl.

I have been working with SNORT for 4 years and I couldn't find any existing scripts that were able to report on potential attacks quickly.

My first goal was to generate a text output (ASCII) to provide many sorting and filtering statistics. Eventually, I improved my program to generate charts (HTML) with graphics and a GUI.

You may ask why not use MySQL database or similar like ACID. As a member of SNORT's mailing list for a long time now, I often read questions about this error "Fatal error: Maximum execution time of 180 seconds exceeded".

You can egularly purge your database but this task could prove tough for the administrator. Moreover, in a network with a lot of NIDS and several thousand log alerts, a request to the database will have a long response time.

The use of a program like **Snortalog** is more easier, efficient and appropriate. Do your own tests and send me your feedback :))

# 6 Installation

## 6.1 Main installation

It's very easy to use Snortalog in standard mode (simple command line without graphics generation). The only things you should have is Perl 5.8 installed on your box.

Snortalog runs on many Operating Systems :

- Linux
- FreeBSD
- OpenBSD
- Solaris

## 6.2 Graphic plugin installation

If you have decided to use Snortalog with any of its extended options, you will need to install some specific plugins not included as standard with Perl 5.8

| Option | Plugin |
|---|---|
| • **-g :** Graphics generation | You will need to install :<br>• gd-2.0.11.tar.gz (PNG and JPG format) or GD-1.19.tar.gz (GIF format)<br>• GDGraph-1.39.tar.gz<br>• GDTextUtil-0.85.tar.gz |
| • **-x :** Graphic User Interface | Modules and TK code for Perl/Tk |
| • **-p :** PDF generation | You will need to install :<br>• htmldoc-1.8.23-source.tar.gz<br>• HTML-HTMLDoc-0.07.tar.gz |

### 6.2.1 GD-1.19.tar.gz

```
# tar xzvf GD-1.19.tar.gz
# cd GD-1.19
#
# perl Makefile.PL
Checking if your kit is complete...
Looks good
MakeMaker (v6.03)
Writing Makefile for libgd
Writing Makefile for GD
#
# make
# make install
```

### 6.2.2 GDTextUtil-0.85

```
# tar xzvf GDTextUtil-0.85.tar.gz
# cd GDTextUtil-0.85
#
# perl Makefile.PL
Checking if your kit is complete...
Looks good
Writing Makefile for GD::Text
#
# make
# make install
```

### 6.2.3 GDGraph-1.39

```
# tar xzvf GDGraph-1.39.tar.gz
# cd GDGraph-1.39
#
# perl Makefile.PL
Checking if your kit is complete...
Looks good
Writing Makefile for GD::Graph

The automatic tests for GDGraph are not really a solid workout of the
library. The best way to test the package is to run the examples
before installing it.  You can run the examples in the samples
directory with `make samples` or by going into that directory, and
just running `make`.
If that fails, please read samples/Makefile.
#
# make
# make install
```

### 6.2.4 Gd-2.0.11

```
# tar xzvf gd-2.0.11.tar.gz
# cd gd-2.0.11
#
# ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking for gcc... gcc
checking for C compiler default output... a.out
checking whether the C compiler works... yes
...
checking for jpeg_set_defaults in -ljpeg... yes
checking for XpmReadFileToXpmImage in -lXpm... no

** Configuration summary for gd 2.0.11:

  Support for PNG library:          yes
  Support for JPEG library:         yes
  Support for Freetype 2.x library: no
  Support for Xpm library:          no

configure: creating ./config.status
```

```
config.status: creating Makefile
config.status: creating config/Makefile
config.status: creating config/gdlib-config
config.status: creating test/Makefile
config.status: creating config.h
config.status: executing depfiles commands
#
#make
#make install
```

### 6.2.5 HTML-HTMLDoc-0.07

```
#
# tar xzvf HTML-HTMLDoc-0.07.tar.gz
# cd HTML-HTMLDoc-0.07
#
# perl Makefile.PL
Checking if your kit is complete...
Looks good
Writing Makefile for HTML::HTMLDoc
#
# make
# make install
#
```

### 6.2.6 HTMLDoc-1.8.23

```
#
# tar xzvf htmldoc-1.8.23-source.tar.gz
# cd htmldoc-1.8.23
#
# ./configure
# make
#
```

Please consult the HTMLDOC Users Manual http://www.easysw.com/htmldoc/documentation.html or the COMPILE.txt file for more information.

# 7 Configuration

You need to specify the PATH of the PERL binary in the first line of the script as shown below. The path for the perl interpreter in your system can be found using "#which perl " command at your shell.

```
# vi snortalog.pl

#!/usr/bin/perl
...
```

Here, the Snortalog initialization part :

```
#!/usr/bin/perl
#
# Jeremy Chartier, <jeremy.chartier@free.fr>
# Date: 2003/11/28
# Revision: 2.1.0
#

# User variables
# General Librairies - Never comment
use Getopt::Long;               # use Getopt for options
use Socket;                     # use socket for resolving domain name from IP
# Graphical Tool Kit Librairies
use Tk; $TK = 1;                    # use Tk for using GUI
use Tk::NoteBook; $TK = 2;              # use Tk::NoteBook for using GUI
# GD Librairies for charts
use GD::Graph::pie; $GD = 1;
use GD::Graph::bars; $GD = 2;
use GD::Graph::lines; $GD = 3;
use GD::Graph::area; $GD = 4;
# HTML and PDF manipulation librairies
use HTML::HTMLDoc; $HTML = 1;

# Main variables
$domains_file = "/tmp/domains"; $DOMAINS = 1;   # Path to find Domain file
$rules_file = "/tmp/rules"; $RULES = 1;         # Path to find Rules file
$html_directorie = "/tmp/";                     # Default output directories (HTML
output exclusively)
$tmpout_file = "/tmp/.snortalog.tmp";           # Default tempory file (GUI
exclusively)

# Comment variables
$legende_red = "Dangerous connections (continue your investigations in this way)";
$legende_green = "Warning connections (strange, may be it will be interesting to
search)";
$legende_black = "Not dangerous alert";
```

Any variable you don't need may be commented out with a hash "#" (except General Librairies). For example, it's possible to disable specific features like GUI for folks who don't need it, or not to generate charts.

Also, if you have problem with your perl's librairies, it's easy to comment out the following line :

```
# Graphical Tool Kit Librairies
use Tk; $TK = 1;                    # use Tk for using GUI
use Tk::NoteBook; $TK = 2;          # use Tk::NoteBook for using GUI
# GD Librairies for charts
use GD::Graph::pie; $GD = 1;
use GD::Graph::bars; $GD = 2;
use GD::Graph::lines; $GD = 3;
use GD::Graph::area; $GD = 4;
# HTML and PDF manipulation librairies
use HTML::HTMLDoc; $HTML = 1;
```

Or modify my own comments with yours :

```
# Comment variables
$legende_red = "Dangerous connections (potentially bad, further investigations needed !)";
$legende_green = "Warning connections (strange, may need further investigation ?)";
$legende_black = "Not dangerous alert";
```

## 7.1 Domain File

The aim of this file is to provide a database of international domain extension (.com .fr .uk etc ...) and its full name (United States, France, United Kingdom etc ...).

As an initial step in the full process of deciphering source domains and including these in the report, SnortALog read this file into memory.

In this full process, Snortalog read this file at the first step for initializing a table in memory.

So, it's important to specify the directory where snortalog can find it. Simply edit Snortalog and set "$domain_file" variable.

It's possible you don't have this file or you don't want to use it, in this case, comment out with "#" the "$domain_file" variable.

You must remember that if you comment it out, you will not have the possibility to have certain reports like the **domain report**.

It's also possible to modify this file. You can add new extension (if it doesn't exist) or modify it (if you don't like the full name). Be careful, it's very important to always respect the format :

<EXTENSION>  <Full name>

Here is, an example :

```
DK   Denmark
DO   Dominican Republic
DZ   Algeria
EC   Ecuador
EE   Estonia
EG   Egypt
EH   Western Sahara
ES   Spain
FI   Finland
FR   France
GB   Great Britain (UK)
GD   Grenada
GE   Georgia
GH   Ghana
GL   Greenland
```

## 7.2 Rules File

The aim of this file is to provide a file which contains all snort's reference attack signatures.

What is a Snort reference attack signature : It's a official internet link which give information about the detected attack. It's looks something like this :

```
alert tcp $EXTERNAL_NET any -> $HOME_NET 27374
(msg:"MISC ramen worm incoming"; flow:established;
content: "GET "; depth: 8;
nocase;reference:arachnids,460; classtype:bad-
unknown; sid:506; rev:3;)
```

In a Snort signature, it's possible to have several references. However, you must realise that Snortalog works with only one reference. If your Snort signature contains several references, then it's important to put your best reference first.

You can find a sample reference rule file at http://jeremy.chartier.free.fr/snortalog/rules but Snortalog is able to generate its own rule file by performing a function on your existing rule files. For that you must do :

```
cat *.rules | ./snortalog.pl -genref <your file>
```

In its full process, Snortalog reads this file at the first step for initializing a table in memory. So, it's important to specify the directory where Snortalog can find it. Simply edit Snortalog and set the "$rules_file" variable.

It's possible that you don't have this file or you don't want to use it, in this case, comment out with "#" the "$rules_file" variable.

Be careful, it's very important to always respect the format :

<Attack designation> {<Protocol>} <referer>,<ID reference>

Here an example :

```
ATTACK-RESPONSES Microsoft cmd.exe banner {TCP}          nessus,11633
BACKDOOR subseven 22 {TCP}              url,www.hackfix.org/subseven/
BACKDOOR netbus active {TCP}            arachnids,401
BACKDOOR netbus getinfo {TCP}           arachnids,403
BACKDOOR netbus active {TCP}            arachnids,401
BACKDOOR DeepThroat 3.1 Server Response {UDP}           arachnids,106
BACKDOOR DeepThroat 3.1 Server Response [3150] {UDP}            arachnids,106
BACKDOOR DeepThroat 3.1 Server Response [4120] {UDP}            arachnids,106
BACKDOOR Doly 2.0 access {TCP}          arachnids,312
BAD-TRAFFIC IP Proto 53 (SWIPE) {IP}            cve,CAN-2003-0567
BAD-TRAFFIC IP Proto 55 (IP Mobility) {IP}              cve,CAN-2003-0567
BAD-TRAFFIC IP Proto 77 (Sun ND) {IP}           cve,CAN-2003-0567
BAD-TRAFFIC IP Proto 103 (PIM) {IP}             cve,CAN-2003-0567
CHAT ICQ forced user addition {TCP}             cve,CAN-2001-1305
DDOS TFN Probe {ICMP}           arachnids,443
DDOS tfn2k icmp possible communication {ICMP}           arachnids,425
DDOS Trin00\:DaemontoMaster(PONGdetected) {UDP}         arachnids,187
DDOS TFN client command BE {ICMP}               arachnids,184
DDOS shaft client to handler {TCP}              arachnids,254
DDOS Trin00\:DaemontoMaster(messagedetected) {UDP}              arachnids,186
```

It's also possible to modify this file. You can have several reasons :

- If the snort refrence signature doesn't satisfy you : you can modify the link refrence or simply delete it
- If the official snort reference doesn't exist : you can add it
- If the snort reference doesn't exist : you can add your own rule and choose to reference that

**Warning :** works only with HTML.

# 8 How to use Snortalog ?

You have two solutions for using Snortalog, with the Command Line Interface or with the Graphic User Interface.

## 8.1 Command Line Interface

### 8.1.1 Example

By this way, you must redirect the logs to Snortalog as shown by the following shell command :

```
#
# cat logs.file | ./snortalog.pl –n 50
#
```

Why I did not ask for a specific file name ?

Just for one reason (but a smart one :-). For daily logs rotation, I'm using the file name format file_yyyymmdd.log (Year, Month and Day). So it's easy for me to generate daily, weekly, monthly and yearly report without any file renaming operations but we will see that in examples.

So, this is the command line argument :

```
#
# cat <alerts file> or <snort.rules> | ./snortalog.pl <options>
<reports> <filters>
#
```

### 8.1.2 Available options

The following options are available :

| | |
|---|---|
| -x | Mode GUI |
| -r | Resolve IP adresses |
| -c | Resolve domains |
| -h <file.html> | Specify a HTML file |
| -p <file.pdf> | Specify a PDF file |
| -u <directorie> | Specify a directorie |
| -g <gif\|png\|jpg> | Graph output format |
| -i | Reverse the result |
| -d | Mode debug |
| -n <integer> | Specify a number of line in the result |
| -file <log file> | Specify a log file |
| -genref | Generate the reference rules file |
| -help | View this help |

The following reports are available :

| | |
|---|---|
| -src | Top IPs sources |
| -dst | Top IPs destination |
| -src_attack | Top IPs sources grouped by attack |
| -dst_attack | Top IPs destination grouped by attack |
| -src_dst_attack | Top alert grouped by IPs sources, Ips destination and attack |

| | |
|---|---|
| -attack | Top attack |
| -class | Top classification |
| -severity | Top severity |
| -daily_event | Top number of attack grouped by day |
| -hour | Top number of attack grouped by hour |
| -hour_attack | Top specific attack grouped by hour |
| -dport | Top destination port |
| -proto | Top usage of protocole |
| -dport_attack | Top destination port grouped by attack |
| -nids | Top NIDS host |
| -stateful | Top stateful problems |
| -interfaces | Top interfaces events |
| -domain_src | Top of domain source |
| -portscan | Top of portscan alert |
| -actions | Top of firewall action (DROP, REJECT, ACCEPT, etc ...) |
| -rules | Top number of DROP by rule (only Fw-1) |
| -reasons | Top number of DROP reason (only Fw-1) |
| -same_src_dport | Top IPs sources grouped by destination port |
| -same_dst_dport | Top IPs destination grouped by destination port |
| -report | All reports |

The following filters are available :

| | |
|---|---|
| -fsrc | Sources filter |
| -fdst | Destination filter |
| -fproto | Protocole filter |
| -fdport | Destination port filter |
| -fmonth | Month filter |
| -fday | Day filter |
| -fhour | Hour filter |
| -fether | Interface filter |
| -fseverity | Severity filter |
| -faction | Firewall action filter |
| -frule | Firewall rule filter |

### 8.1.3 Examples

```
# cat snort*.rules | ./snortalog.pl –genref refsigtxt
```

Snortalog will generate a referenced rules file from your Snort rule or your own signatures.

```
# cat file.logs | ./snortalog.pl –r –n 30 –report
```

Snortalog will generate a report in ASCII format with address resolution and a maximum of 30 occurences for all reports.

```
# cat file.logs | ./snortalog.pl –r –n 30 –dst_attack
```

Snortalog will generate a report in ASCII format with address resolution and a maximum of 30 occurences for the report dst_attack.

```
# cat file.logs | ./snortalog.pl –r –i –h file.html –report
```

Snortalog will generate a report in HTML format stored in file.html with address resolution and display the results from least frequent to most frequent occurences (reverse mode).

```
# cat file.logs | ./snortalog.pl –r –g gif –h file.html –u /tmp/ –report
```

Same as the previous example but with Gif graphs and in a specific directorie.

```
# cat file.logs | ./snortalog.pl –n 50 –report –fether eth0
```

Snortalog will generate a report with filter interface “eth0”.

```
# cat file.logs | ./snortalog.pl –i –n 30 –report | /usr/sbin/sendmail –f user@domain
user@domain
```

Snortalog will generate a report in ASCII format with reverse request, and a maximum of 30 occurences for all reports and send the result by mail.

```
# cat file_200212[1-7] | ./snortalog.pl –report
```

Snortalog will generate a report in ASCII format with all events of the first week of December (between the 1st and 7th).

```
# cat file_20021* | ./snortalog.pl –report
```

Snortalog will generate a report in ASCII format with all events of the three last months of the year 2002 (month 10, 11 and 12).

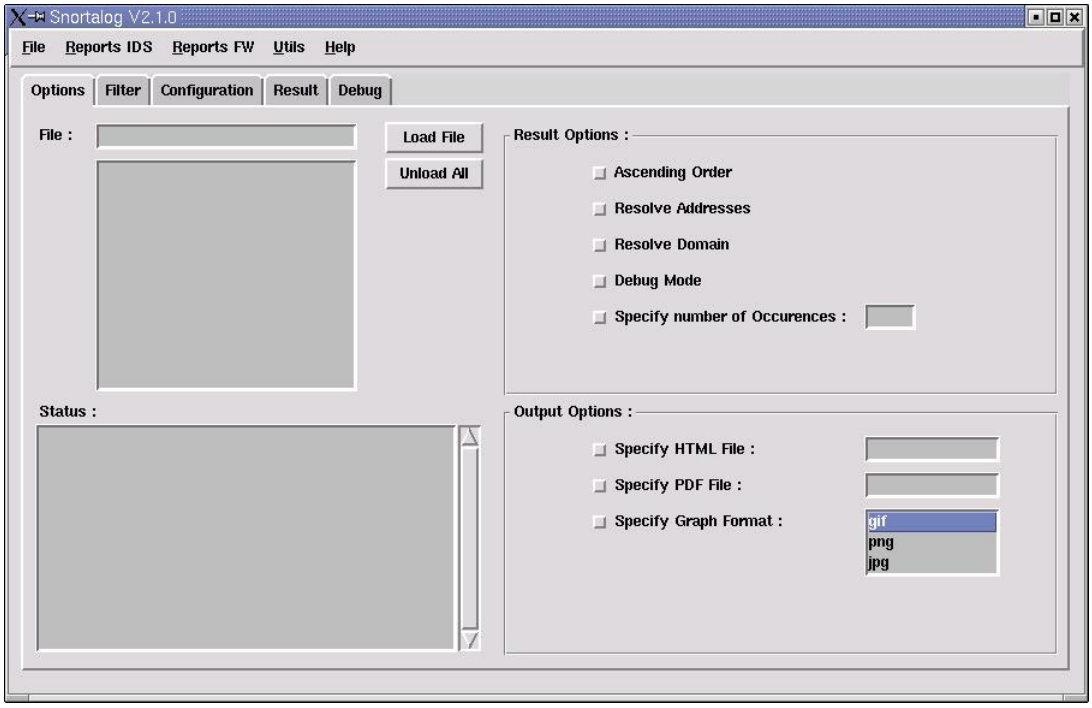
**Warning :** The usage of “-r” and “-c” option will slow down the process.

## 8.2 Graphic User Interface

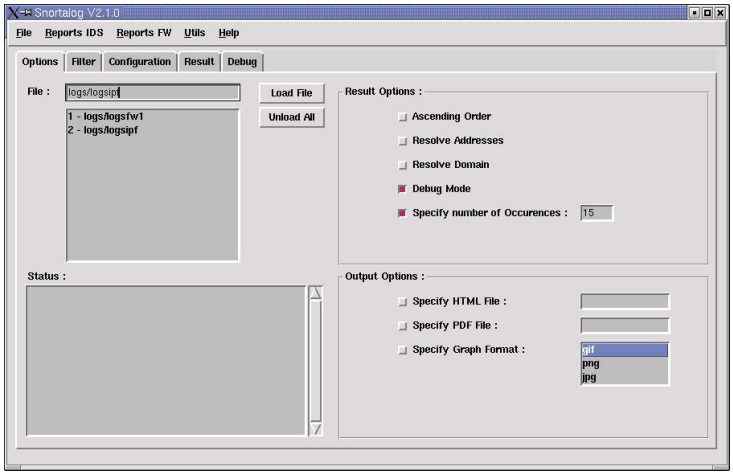
When launching the GUI, be careful to install all dependencies and perform Snortalog with this option :

```
# ./snortalog.pl –x
```

If everything is okay, you will see this :




Below, an easy example step by step for using GUI :

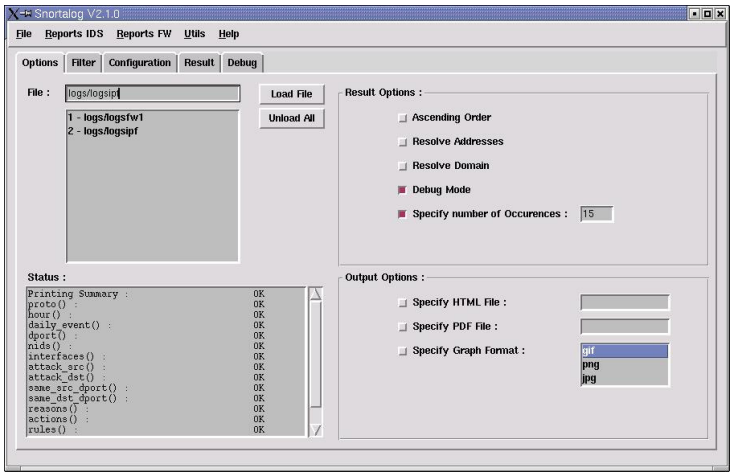



First, we need to load all the log files we want. To do this, enter the path and the file name in the “File box” and click “Load File”.

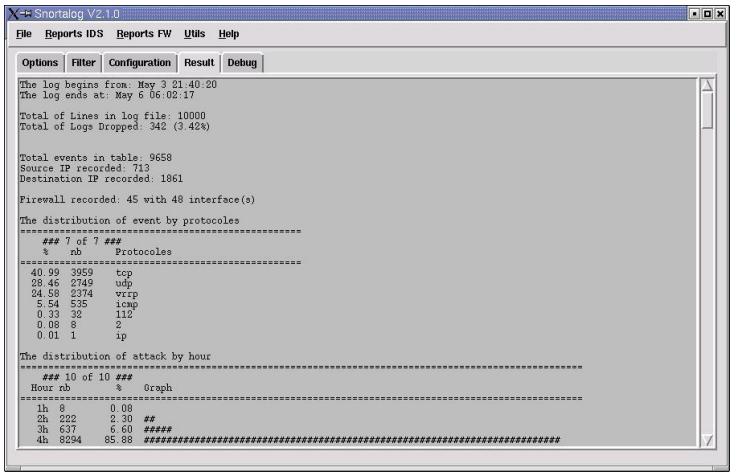
We can select or unselect “Result Options” or “Output Options”.

**Warning :** “Resolve Addresses” and “Resolve Domain” can take few minutes for result.

Second, we need to select a report from “Reports IDS or FW” tasks menu bar.

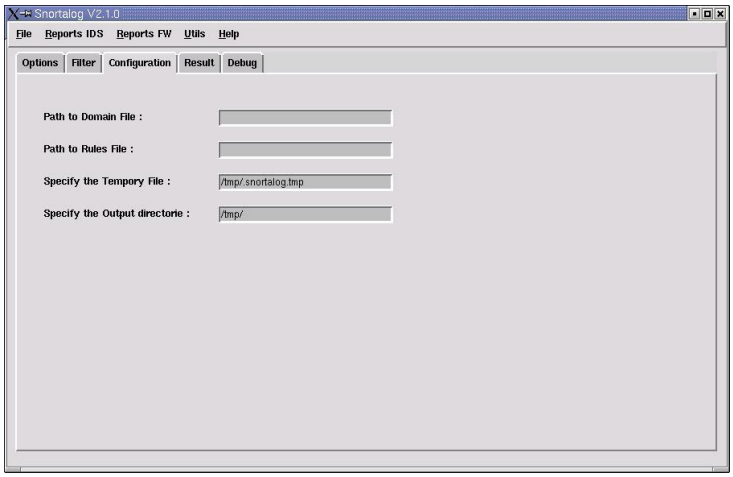



We can see if all reports are OK in “States” list.




We can view the result in “Result” tab and navigate with the right scrollbar.

Also, as we have selected “Debug Mode” on main screen, we can view the logs that Snortalog can’t load in the “Debug” tab.




It’s possible with the “Configuration” tab to configure several variables.

We can specify the path to “Domain File” and “Rules File”. It’s important to have something in “Tempory File” and “Output Directory” if we want everything to work correctly.

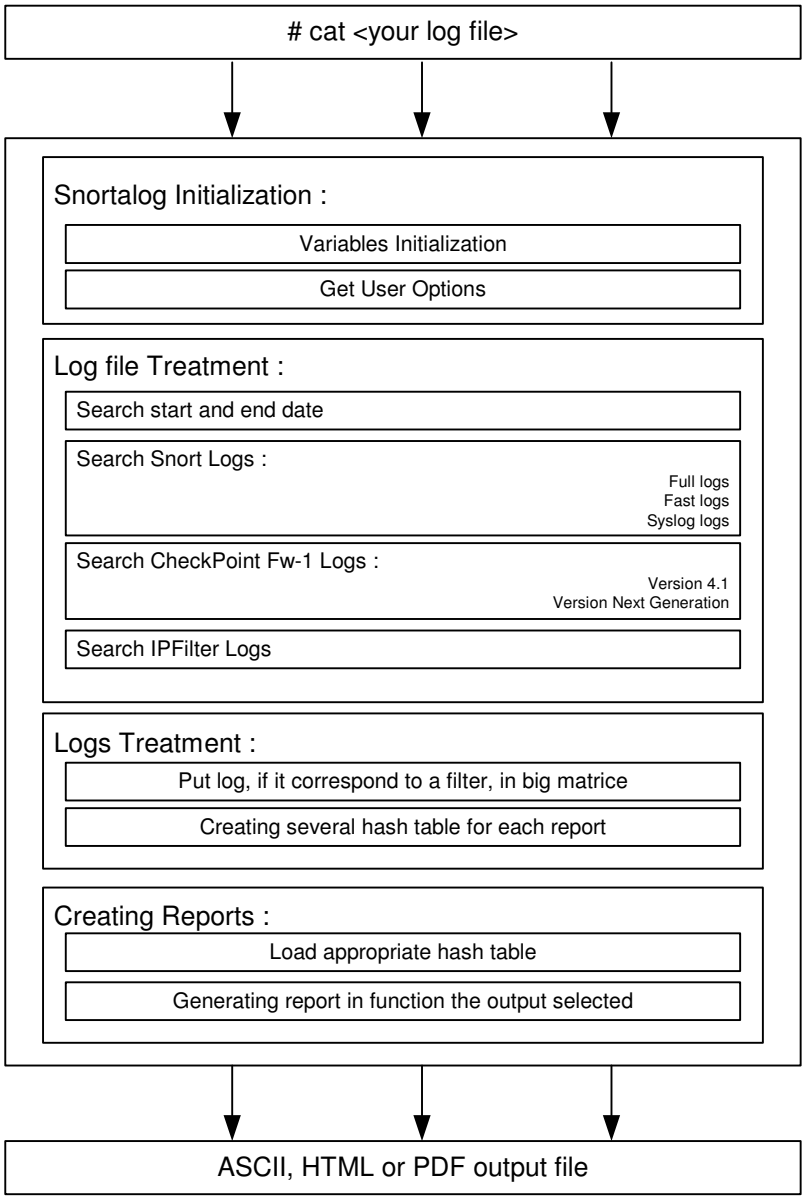
These default variables can also be modified directly in PERL program.

**What advantages does using the GUI bring me ?**

It’s interesting to use the GUI because you can load several log files at the same time and generate as many reports as you want. In CLI mode, you can’t do that because you need to redirect your logs each time you want to use Snortalog.

Using this method (GUI), you can generate severals reports (ASCII, HTML or PDF output) in one step.

# 9 How Snortalog works ?




# 10 What kind of logs does Snortalog expect ?

## 10.1 Snort logs

### 10.1.1 Snort fast alert

```
01/31-17:37:39.987506  [**] [1:671:4] SMTP sendmail 8.6.9c exploit [**]
[Classification: Attempted_User_Privilege_Gain] [Priority: 1] {TCP} 1.2.3.4:27191 ->
192.168.1.97:25

01/31-17:37:39.989398  [**] [1:1160:6] WEB-MISC netscape dir index wp [**]
[Classification: Attempted_Information_Leak] [Priority: 2] {TCP} 1.2.3.4:52502 ->
192.168.1.97:80
```

```
01/31-17:37:39.991339  [**] [1:677:5] MS-SQL/SMB sp_password password change [**]
[Classification: Attempted_User_Privilege_Gain] [Priority: 1] {TCP} 1.2.3.4:38263 ->
192.168.1.97:139

01/31-17:37:39.999730  [**] [1:345:5] FTP EXPLOIT wu-ftpd 2.6.0 site exec format
string overflow generic [**] [Classification: Attempted_Administrator_Privilege
Gain] [Priority: 1] {TCP} 1.2.3.4:16983 -> 192.168.1.97:21

01/31-17:37:40.008521  [**] [1:221:1] DDOS TFN Probe [**] [Classification:
Attempted_Information_Leak] [Priority: 2] {ICMP} 1.2.3.4 -> 192.168.1.97
```

### 10.1.2 Snort full alert

```
[**] [1:540:8] CHAT MSN message [**]
[Classification: Misc activity] [Priority: 3]
09/23-09:09:20.633544 10.21.145.60:1714 -> 207.46.108.21:1863
TCP TTL:124 TOS:0x0 ID:16516 IpLen:20 DgmLen:201 DF
***AP*** Seq: 0xAFF293D6  Ack: 0x9549F9D7  Win: 0xF9F8  TcpLen: 20

 [**] [1:528:3] BAD TRAFFIC loopback traffic [**]
[Classification: Potentially Bad Traffic] [Priority: 2]
09/23-09:09:22.581891 10.29.12.177:161 -> 127.0.0.1:162
UDP TTL:57 TOS:0x0 ID:40247 IpLen:20 DgmLen:211
Len: 191
[Xref => http://rr.sans.org/firewall/egress.php
```

### 10.1.3 Snort syslog alert

```
Mar 12 14:10:31 10.0.0.2/10.0.0.2 snort[524]: [1:1287:5] WEB-IIS scripts access
[Classification: access to a potentially vulnerable web application] [Priority: 2]:
{TCP} 193.219.28.101:63582 -> 149.46.224.194:80

Mar 12 13:44:28 10.0.0.1/10.0.0.1 snort[22976]: [1:895:5] WEB-CGI redirect access
[Classification: Attempted Information Leak] [Priority: 2]: {TCP}
208.214.188.62:61119 -> 149.46.214.192:80

Mar 12 14:24:50 10.0.0.2/10.0.0.2 snort[524]: [1:1244:6] WEB-IIS ISAPI .idq attempt
[Classification: Web Application Attack] [Priority: 1]: {TCP} 193.249.155.3:1424 ->
149.46.224.192:80

Mar 12 14:25:20 10.0.0.2/10.0.0.2 snort[524]: [1:466:1] ICMP L3retriever Ping
[Classification: Attempted Information Leak] [Priority: 2]: {ICMP} 80.13.197.190 ->
149.46.224.13

Mar 12 14:25:55 10.0.0.2/10.0.0.2 snort[524]: [1:1042:6] WEB-IIS view source via
translate header [Classification: access to a potentially vulnerable web
application] [Priority: 2]: {TCP} 80.13.197.190:4787 -> 149.46.244.192:80
```

## 10.2 CheckPoint FW-1

### 10.2.1 FW-1 4.1

```
May  6 04:12:51 10.0.0.1/10.0.0.1 root:  4:12:50 drop   flamm.192.225 >qfe12 proto
```

```
tcp src 17.216.0.58 dst 206.117.161.100 service mail s_port 37163 len 48 rule 191
xlatesrc 195.46.206.51 xlatedst 206.117.161.100 xlatesport 37163 xlatedport mail

May  6 04:12:55 10.0.0.1/10.0.0.1 root:  4:12:55 drop   flamm.192.225 >qfe12 proto
tcp src 17.216.0.58 dst 216.219.253.216 service mail s_port 37025 rule 0 reason:
unknown established TCP packet

May  6 04:03:55 10.0.0.2/10.0.0.2 root:  4:03:54 reject fwvtx      >hme4 proto tcp
src 172.171.144.17 dst 162.168.1.9 service pop-3 s_port sqlnet1 rule 34 reason: port
belong to service in TCP Fast Mode, port: sqlnet1

May  6 04:12:40 10.0.0.2/10.0.0.2 root:  4:12:39 drop   picasso    >qfe0 proto icmp
src 203.148.174.121 dst 145.246.217.61 rule 142 icmp-type 3 icmp-code 1

May  6 04:08:21 10.0.0.1/10.0.0.1 root:  4:08:21 drop   cosme      >hme0 proto udp
src 200.41.92.96 dst 144.127.222.45 service nbname s_port 1045 len 78 rule 41
```

### 10.2.2 FW-1 Next Generation

```
Aug 26 23:53:10 10.0.0.1 root: [ID 702911 user.notice] 23:53:10 drop   10.0.0.1
>qfe0 product: VPN-1 & FireWall-1; src: 195.46.223.247; s_port: nbdatagram; dst:
195.146.223.2; service: nbdatagram; proto: udp; message_info: Address spoofing;

Aug 26 23:53:54 10.0.0.1 root: [ID 702911 user.notice] 23:53:54 drop   10.0.0.1
>hme0 product: VPN-1 & FireWall-1; src: 68.155.36.158; dst: 14.17.218.26; proto:
icmp; icmp-type: 8; icmp-code: 0; rule: 28;

Aug 27 05:56:53 10.0.0.1 root: [ID 702911 user.notice]  5:56:52 drop   10.0.0.1
>hme0 product: VPN-1 & FireWall-1; src: 62.149.140.15; s_port: http; dst:
191.17.218.225; service: 1223; proto: tcp; th_flags: 12; message_info: TCP packet
out of state;

Aug 27 09:18:15 10.0.0.1 root: [ID 702911 user.notice]  9:18:14 drop   10.0.0.1
>qfe3 product: VPN-1 & FireWall-1; src: 12.18.14.20; s_port: 35896; dst:
171.171.0.12; service: syslog; proto: udp; rule: 28;

Aug 27 10:06:14 10.0.0.1 root: [ID 702911 user.notice] 10:06:13 drop   10.0.0.1
>hme0 product: VPN-1 & FireWall-1; src: 213.165.59.175; s_port: 1619; dst:
191.17.218.246; service: 135; proto: tcp; rule: 28;
```

## 10.3 Free Firewalls

### 10.3.1 IPFilter

```
May  6 05:42:54 10.0.0.1/10.0.0.1 ipmon[91]: 05:42:54.104248 fxp0 @0:26 b
212.73.231.228 -> 190.17.117.36 PR icmp len 20 40 icmp echo/0 IN

May  5 22:44:40 10.0.0.2/10.0.0.2 ipmon[66]: 22:44:40.872086 fxp4 @0:285 b
192.178.8.17,32845 -> 190.65.60.33,80 PR tcp len 20 48 -S 1744106958 0 24820 IN

May  6 03:49:14 10.0.0.2/10.0.0.2 ipmon[9775]: 03:49:14.170319 sf2 @0:181 b
191.46.17.167,1444 -> 191.46.17.146,6050 PR tcp len 20 40 -A 3374366425 1952656703
8760 IN

May  6 04:05:56 10.0.0.1/10.0.0.1 ipmon[9942]: 04:05:56.214183             sf3
@0:1204 b 101.88.2.3,137 -> 101.88.2.254,137 PR udp len 20 78  IN

May  6 04:00:16 10.0.0.1/10.0.0.1 ipmon[9775]: 04:00:16.730522 sf2 @0:181 b
```

```
191.146.27.167,1444 -> 191.146.17.146,6050 PR tcp len 20 40 -A 3374366425 507567241
8760 IN
```

### 10.3.2 Netfilter

```
Nov 17 16:52:52 host kernel: IN=eth0 OUT=
MAC=00:10:5a:b1:25:1d:00:d0:b7:bd:aa:28:08:00 SRC=197.163.1.92 DST=10.18.1.49 LEN=48
TOS=0x00 PREC=0x00 TTL=128 ID=31660 DF PROTO=TCP SPT=4075 DPT=25 WINDOW=16384
RES=0x00 SYN URGP=0

Nov 17 16:52:54 host kernel: IN=eth0 OUT=
MAC=00:10:5a:b1:25:1d:00:d0:b7:bd:aa:28:08:00 SRC=197.163.1.92 DST=10.18.1.49 LEN=48
TOS=0x00 PREC=0x00 TTL=128 ID=31677 DF PROTO=TCP SPT=4075 DPT=21 WINDOW=16384
RES=0x00 SYN URGP=0

Nov 17 16:53:00 host kernel: IN=eth0 OUT=
MAC=00:10:5a:b1:25:1d:00:d0:b7:bd:aa:28:08:00 SRC=197.163.1.92 DST=10.18.1.49 LEN=48
TOS=0x00 PREC=0x00 TTL=128 ID=31711 DF PROTO=TCP SPT=4075 DPT=25 WINDOW=16384
RES=0x00 SYN URGP=0

Nov 17 16:53:48 host kernel: IN=lo OUT=
MAC=00:00:00:00:00:00:00:00:00:00:00:00:08:00 SRC=197.163.1.92 DST=10.18.1.49 LEN=36
TOS=0x10 PREC=0x00 TTL=64 ID=0 DF PROTO=UDP SPT=123 DPT=32768 LEN=16

Nov 17 16:54:48 host kernel: IN=lo OUT=
MAC=00:00:00:00:00:00:00:00:00:00:00:00:08:00 SRC=197.163.1.92 DST=10.18.1.49 LEN=36
TOS=0x10 PREC=0x00 TTL=64 ID=0 DF PROTO=UDP SPT=123 DPT=32768 LEN=16
```

# 11 FAQ

**1) When I try to run Snortalog, this error message appears :**

Can't locate GD/Graph/pie.pm in @INC (@INC contains: /usr/local/lib/perl5/5.8.0/ sun4-solaris /usr/local/lib/perl5/5.8.0 /usr/local/lib/perl5/site_perl/5.8.0/sun 4-solaris /usr/local/lib/perl5/site_perl/5.8.0 /usr/local/lib/perl5/site_perl .) at ./snortalog.pl line 806.

- You can be sure that Perl isn't finding the appropiate librairies. For help in correcting this, go to the dependencies page.

**2) I correctly compiled dependency libraries but it's no better :**

You can be sure you are not using Perl 5.8. Verify like this :

```
Summary of my perl5 (revision 5.0 version 8 subversion 0) configuration:
 Platform:
      ...
 Compiler:
      ...
 Linker and Libraries:
      ...
 Dynamic Linking:
      ...

Characteristics of this binary (from libperl):
 Compile-time options: MULTIPLICITY USE_ITHREADS USE_LARGE_FILES
```

```
PERL_IMPLICIT_CONTEXT
 Built under linux
 Compiled at Sep  6 2002 23:24:44
 @INC:
   /usr/lib/perl5/5.8.0/i386-linux-thread-multi
   /usr/lib/perl5/5.8.0
   /usr/lib/perl5/site_perl/5.8.0/i386-linux-thread-multi
   /usr/lib/perl5/site_perl/5.8.0
   /usr/lib/perl5/site_perl
   /usr/lib/perl5/vendor_perl/5.8.0/i386-linux-thread-multi
   /usr/lib/perl5/vendor_perl/5.8.0
   /usr/lib/perl5/vendor_perl
```

**3) When I try to generate PNG charts, this error message appears :**

Can't locate object method "png" via package "GD::Image" at ./snortalog.pl line 862.

- Your Perl's libraries don't support PNG format.To correct this, try to use GIF or JPG format instead.