IDS - SNORT

SEMINARIO LINUX
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INSTALACIÓN SNORT

1. Instalar fuentes de librerias para la instalación de SNORT.

sudo apt install -y gcc libpcre3-dev zlib1g-dev libluajit-5.1-dev libpcap-dev openssl libssl-dev libnghttp2-dev libdumbnet-dev bison flex libdnet

```
Albig-dev paste on su version mais reciente (1:1,:11:dfsp-debentu2).

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```

2. Ir a la ruta de fuentes de SNORT

mkdir ~/snort_src && cd ~/snort_src

```
adminserver@padilla:~$ mkdir ~/snort_src && cd ~/snort_src
adminserver@padilla:~/snort_src$
adminserver@padilla:~/snort_src$
```

3. Obtener Fuentes

wget https://www.snort.org/downloads/snort/daq-2.0.6.tar.gz

```
adminserver@padilla:-/snort_srck wget https://www.snort.org/downloads/snort/daq-2.0.6.tar.gz
--2019-11-22 13:15:17- https://www.snort.org/downloads/snort/daq-2.0.6.tar.gz
--2019-11-22 13:15:17- https://www.snort.org/downloads/snort/daq-2.0.6.tar.gz

Secolving mww.snort.org (www.snort.org) [104.18.109.g] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [104.18.103.9] [
```

4. Descomprimir paquetes descargados

tar -xvzf daq-2.0.6.tar.gz

```
adminserver@padilla:~/snort src$ tar -xvzf daq-2.0.6.tar.gz
dag-2.0.6/
daq-2.0.6/ChangeLog
daq-2.0.6/missing
daq-2.0.6/daq.dsp
daq-2.0.6/configure
daq-2.0.6/sfbpf/
daq-2.0.6/sfbpf/sf_bpf_printer.c
dag-2.0.6/sfbpf/IP6 misc.h
dag-2.0.6/sfbpf/sf gencode.c
dag-2.0.6/sfbpf/llc.h
dag-2.0.6/sfbpf/ppp.h
daq-2.0.6/sfbpf/grammar.y
daq-2.0.6/sfbpf/sf_nametoaddr.c
daq-2.0.6/sfbpf/sf_bpf_filter.c
dag-2.0.6/sfbpf/sfbpf dlt.h
dag-2.0.6/sfbpf/ethertype.h
daq-2.0.6/sfbpf/arcnet.h
dag-2.0.6/sfbpf/ieee80211.h
dag-2.0.6/sfbpf/sfbpf-int.h
daq-2.0.6/sfbpf/namedb.h
daq-2.0.6/sfbpf/Makefile.am
daq-2.0.6/sfbpf/runlex.sh
dag-2.0.6/sfbpf/atmuni31.h
dag-2.0.6/sfbpf/sf-redefines.h
daq-2.0.6/sfbpf/win32-stdinc.h
daq-2.0.6/sfbpf/sunatmpos.h
daq-2.0.6/sfbpf/sf_optimize.c
daq-2.0.6/sfbpf/sfbpf-int.c
daq-2.0.6/sfbpf/sfbpf.h
daq-2.0.6/sfbpf/gencode.h
dag-2.0.6/sfbpf/scanner.l
dag-2.0.6/sfbpf/bittypes.h
dag-2.0.6/sfbpf/sll.h
dag-2.0.6/sfbpf/nlpid.h
daq-2.0.6/sfbpf/Makefile.in
daq-2.0.6/sfbpf/ipnet.h
daq-2.0.6/compile
daq-2.0.6/install-sh
dag-2.0.6/Makefile.am
daq-2.0.6/config.sub
daq-2.0.6/os-daq-modules/
dag-2.0.6/os-dag-modules/dag ipfw.c
dag-2.0.6/os-dag-modules/dag ipg.c
daq-2.0.6/os-daq-modules/daq static modules.c
dag-2.0.6/os-dag-modules/dag pcap.c
dag-2.0.6/os-dag-modules/dag nfg.c
dag-2.0.6/os-dag-modules/dag afpacket.c
daq-2.0.6/os-daq-modules/daq-modules-config.in
dag-2.0.6/os-dag-modules/Makefile.am
```

5. ir a carpeta con archivos extraídos

cd daq-2.0.6

```
adminserver@padilla:~/snort src$ cd daq-2.0.6
adminserver@padilla:~/snort_src/daq-2.0.6$ ll
total 1116
drwxr-xr-x 6 adminserver adminserver
                                      4096 jul 16 2015 ./
drwxrwxr-x 3 adminserver adminserver
                                      4096 nov 22 13:17 ../
rw-r--r-- 1 adminserver adminserver 42353 jul 15
                                                  2015 aclocal.m4
                                                   2015 api/
                                      4096 jul 16
drwxr-xr-x 2 adminserver adminserver
rw-r--r-- 1 adminserver adminserver
                                       446 jul 16
                                                   2015 ChangeLog
rwxr-xr-x 1 adminserver adminserver
                                      7333 jul 15
                                                   2015 compile*
rwxr-xr-x 1 adminserver adminserver 42938 jul 15
                                                   2015 config.guess*
                                      6280 jul 15
rw-r--r-- 1 adminserver adminserver
                                                   2015 config.h.in
rwxr-xr-x 1 adminserver adminserver 35987 jul 15
                                                   2015 config.sub*
rwxr-xr-x 1 adminserver adminserver 497485 jul 15
                                                   2015 configure*
rw-r--r-- 1 adminserver adminserver 11296 jul 15
                                                   2015 configure.ac
rw-r--r-- 1 adminserver adminserver 21007 sep 6
                                                   2012 COPYING
rwxr-xr-x 1 adminserver adminserver
                                      7121 jun 8
                                                   2011 dag.dsp*
rwxr-xr-x 1 adminserver adminserver 23566 jul 15
                                                   2015 depcomp*
rwxr-xr-x 1 adminserver adminserver 14675 jul 15
                                                   2015 install-sh*
rw-r--r-- 1 adminserver adminserver 324089 jul 15
                                                   2015 ltmain.sh
drwxr-xr-x 2 adminserver adminserver
                                    4096 jul 16
                                                   2015 m4/
rw-r--r-- 1 adminserver adminserver
                                       168 may 6
                                                   2010 Makefile.am
rw-r--r-- 1 adminserver adminserver 25594 jul 15
                                                   2015 Makefile.in
rwxr-xr-x 1 adminserver adminserver
                                      6872 jul 15
                                                   2015 missing*
drwxr-xr-x 2 adminserver adminserver
                                      4096 jul 16
                                                   2015 os-dag-modules/
rw-r--r-- 1 adminserver adminserver 13381 jun 19
                                                   2014 README
drwxr-xr-x 2 adminserver adminserver 4096 jul 16 2015 sfbpf/
adminserver@padilla:~/snort src/daq-2.0.6$
```

6. Compilar librerías

./configure && make && sudo make install

```
adminserver@padilla:-/snort.src/daq-2.0.6$ ./configure 6& make 6& sudo make install
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for a swak... gawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether make supports nested variables... yes
checking for gcc... gcc
checking for gcc... gcc
checking for C compiler default output file name... a.out
checking for C compiler default output file name... a.out
checking for C compiler default output file name... a.out
checking for suffix of devacutables...
checking whether we are cross compiling... no
checking whether we are using the GNU C compiler... yes
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking whether gcc understands -c and -o together... yes
checking for gcc option to accept 150 C89... none needed
checking whether gcc understands -c and -o together... yes
checking dependency style of gcc... gcc3
checking build system type... x86 64-unknown-linux-gnu
checking build system type... x86 64-unknown-linux-gnu
checking host system type... x86 64-unknown-linux-gnu
checking for a sed that does not truncate output... /bin/sed
checking for grep that handles long lines and -e... /bin/grep
checking for grep that handles long lines and -e... /bin/grep
checking for grep... /bin/grep -F
checking for fgrep... /bin/grep -F
checking for farge... /bin/grep -F
checking the name lister (/usr/bin/ld) is GNU ld... yes
checking the name lister (/usr/bin/lm) -B interface... BSD nm
checking the name lister (/usr/bin/lm) -B interface... BSD nm
checking the maximum length of command line arguments... 1572864
checking how to convert x86 64-unknown-linux-gnu file names to x86 64-unknown-linux-gnu format... func_convert_file_noop
checking how to convert x86 64-unknown-linux-gnu file names to toolchain format... func_convert_file_noop
checking for vusr/b
```

7. Ir a la carpeta de instalación.

cd ~/snort src

```
adminserver@padilla:~/snort_src/daq-2.0.6$ cd ~/snort_src
adminserver@padilla:~/snort_src$ pwd
/home/adminserver/snort_src
adminserver@padilla:~/snort_src$
```

8. Descargar Snort desde las fuentes oficiales.

sudo wget https://www.snort.org/downloads/snort/snort-2.9.15.tar.gz

```
adminserver@padilla:-/snort.src$ sudo wget https://www.snort.org/downloads/snort/snort-2.9.15.tar.gz
--2019-11-22 l3:25:52- https://www.snort.org/downloads/snort/snort-2.9.15.tar.gz
Resolving www.snort.org (www.snort.org) [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.139.9] [104.18.1
```

9, Descomprimir SNORT

tar -xvzf snort-2.9.15.tar.gz

```
adminserver@padilla:~/snort_src$ tar -xvzf snort-2.9.15.tar.gz
snort-2.9.15/
snort-2.9.15/snort.8
snort-2.9.15/install-sh
snort-2.9.15/snort.pc.in
snort-2.9.15/aclocal.m4
snort-2.9.15/config.guess
snort-2.9.15/compile
snort-2.9.15/config.h.in
snort-2.9.15/missing
snort-2.9.15/LICENSE
snort-2.9.15/config.sub
snort-2.9.15/COPYING
snort-2.9.15/templates/
snort-2.9.15/templates/sp_template.c
snort-2.9.15/templates/sp_template.h
snort-2.9.15/templates/spp_template.c
snort-2.9.15/templates/Makefile.in
snort-2.9.15/templates/Makefile.am
snort-2.9.15/templates/spp_template.h
snort-2.9.15/verstuff.pl
snort-2.9.15/Makefile.in
snort-2.9.15/etc/
snort-2.9.15/etc/file magic.conf
```

10. ir a la carpeta de instalación.

cd snort-2.9.15

adminserver@padilla:~/snort_src\$ cd snort-2.9.15 adminserver@padilla:~/snort_src/snort-2.9.15\$ pwd /home/adminserver/snort_src/snort-2.9.15 adminserver@padilla:~/snort_src/snort-2.9.15\$

11. instalación y configuración de snort.

./configure --enable-sourcefire && make && sudo make install

CONFIGURACIÓN SNORT

1. Actualizar Librerías

sudo ldconfig

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo ldconfig adminserver@padilla:~/snort_src/snort-2.9.15$
```

2. Genera enlace de la carpeta

sudo ln -s /usr/local/bin/snort /usr/sbin/snort

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo ln -s /usr/local/bin/snort /usr/sbin/snort adminserver@padilla:~/snort_src/snort-2.9.15$
```

3. Adicionar usuario de servicio a grupos y configuracion nologin

sudo groupadd snort

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo groupadd snort adminserver@padilla:~/snort_src/snort-2.9.15$
```

sudo useradd snort -r -s /sbin/nologin -c SNORT_IDS -g snort

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo useradd snort -r -s /sbin/nologin -c SNORT_IDS -g snort adminserver@padilla:~/snort_src/snort-2.9.15$
```

4. Creación de carpetas de estructura de configuraciones.

```
sudo mkdir -p /etc/snort/rules
sudo mkdir /var/log/snort
sudo mkdir /usr/local/lib/snort_dynamicrules
```

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo mkdir -p /etc/snort/rules
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo mkdir /var/log/snort
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo mkdir /usr/local/lib/snort_dynamicrules
adminserver@padilla:~/snort_src/snort-2.9.15$
```

5. Permisos en carpetas

```
sudo chmod -R 5775 /etc/snort
sudo chmod -R 5775 /var/log/snort
sudo chmod -R 5775 /usr/local/lib/snort_dynamicrules
sudo chown -R snort:snort /etc/snort
sudo chown -R snort:snort /var/log/snort
sudo chown -R snort:snort /usr/local/lib/snort_dynamicrules
```

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo chmod -R 5775 /etc/snort
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo chmod -R 5775 /var/log/snort
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo chmod -R 5775 /usr/local/lib/snort_dynamicrules
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo chown -R snort:snort /etc/snort
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo chown -R snort:snort /var/log/snort
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo chown -R snort:snort /usr/local/lib/snort_dynamicrules
```

6. Creacion de listas blancas y negras para snort.

```
sudo touch /etc/snort/rules/white_list.rules
sudo touch /etc/snort/rules/black_list.rules
sudo touch /etc/snort/rules/local.rules
```

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo touch /etc/snort/rules/white_list.rules adminserver@padilla:~/snort_src/snort-2.9.15$ sudo touch /etc/snort/rules/black_list.rules adminserver@padilla:~/snort_src/snort-2.9.15$ sudo touch /etc/snort/rules/local.rules adminserver@padilla:~/snort_src/snort-2.9.15$
```

7. Copia de archivos de configuracion

```
sudo cp ~/snort_src/snort-2.9.15/etc/*.conf* /etc/snort sudo cp ~/snort_src/snort-2.9.15/etc/*.map /etc/snort
```

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo cp ~/snort_src/snort-2.9.15/etc/*.conf* /etc/snort adminserver@padilla:~/snort_src/snort-2.9.15$ sudo cp ~/snort_src/snort-2.9.15/etc/*.map /etc/snort adminserver@padilla:~/snort_src/snort-2.9.15$
```

REGLAS POR COMUNIDADES

1. Descargar archivos de configuración.

wget https://www.snort.org/rules/community -O ~/community.tar.gz

2. extraer y copiar archivos de configuración.

sudo tar -xvf ~/community.tar.gz -C ~/

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo tar -xvf ~/community.tar.gz -C ~/
[sudo] password for adminserver:
community-rules/
community-rules/community.rules
community-rules/VRT-License.txt
community-rules/LICENSE
community-rules/AUTHORS
community-rules/snort.conf
community-rules/sid-msg.map
adminserver@padilla:~/snort_src/snort-2.9.15$
```

sudo cp ~/community-rules/* /etc/snort/rules

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo cp ~/community-rules/* /etc/snort/rules adminserver@padilla:~/snort_src/snort-2.9.15$
```

3. Actualizar reglas a aplicar

sudo sed -i 's/include \\$RULE_PATH/#include \\$RULE_PATH/' /etc/snort/snort.conf

ARCHIVO DE CONFIGURACIÓN

1. Editar archivo de configuracion.

sudo nano /etc/snort/snort.conf

2. llaves a editar

Setup the network addresses you are protecting ipvar HOME_NET server_public_ip/32

Setup the network addresses you are protecting ipvar HOME_NET 192.168.0.24/24

Set up the external network addresses. Leave as "any" in most situations ipvar EXTERNAL_NET !\$HOME_NET

Path to your rules files (this can be a relative path)
var RULE_PATH /etc/snort/rules
var SO_RULE_PATH /etc/snort/so_rules
var PREPROC_RULE_PATH /etc/snort/preproc_rules

Set the absolute path appropriately var WHITE_LIST_PATH /etc/snort/rules var BLACK_LIST_PATH /etc/snort/rules

unified2

Recommended for most installs output unified2: filename snort.log, limit 128

include \$RULE_PATH/local.rules

include \$RULE_PATH/community.rules

Guardar cambios en el archivo de configuración.

```
adminserver@padilla:~/snort_src/snort-2.9.15$ sudo nano /etc/snort/snort.conf
adminserver@padilla:~/snort_src/snort-2.9.15$ _
```

3. Validar configuraciones

sudo snort -T -c /etc/snort/snort.conf

```
Rule application order: pass->drop->sdrop->reject->alert->log
Verifying Preprocessor Configurations!
        --== Initialization Complete ==--
            -*> Snort! <*-
           Version 2.9.15 GRE (Build 7)
           By Martin Roesch & The Snort Team: http://www.snort.org/contact#team
            Copyright (C) 2014-2019 Cisco and/or its affiliates. All rights reserved.
            Copyright (C) 1998-2013 Sourcefire, Inc., et al.
            Using libpcap version 1.8.1
            Using PCRE version: 8.39 2016-06-14
            Using ZLIB version: 1.2.11
            Rules Engine: SF SNORT DETECTION ENGINE Version 3.1 <Build 1>
            Preprocessor Object: SF GTP Version 1.1 <Build 1>
            Preprocessor Object: SF_SSH Version 1.1 <Build 3>
            Preprocessor Object: SF_SMTP Version 1.1 <Build 9>
            Preprocessor Object: SF_REPUTATION Version 1.1 <Build 1>
            Preprocessor Object: SF_SIP Version 1.1 <Build 1>
Preprocessor Object: SF_SDF Version 1.1 <Build 1>
Preprocessor Object: SF_DNS Version 1.1 <Build 4>
            Preprocessor Object: SF_FTPTELNET Version 1.2 <Build 13>
            Preprocessor Object: SF DCERPC2 Version 1.0 <Build 3>
            Preprocessor Object: SF DNP3 Version 1.1 <Build 1>
            Preprocessor Object: SF MODBUS Version 1.1 <Build 1>
            Preprocessor Object: appid Version 1.1 <Build 5>
            Preprocessor Object: SF_POP Version 1.0 <Build 1>
            Preprocessor Object: SF_IMAP Version 1.0 <Build 1> Preprocessor Object: SF_SSLPP Version 1.1 <Build 4>
Snort successfully validated the configuration!
Snort exiting
adminserver@padilla:/etc/snort/rules$ sudo snort -T -c /etc/snort/snort.conf
```