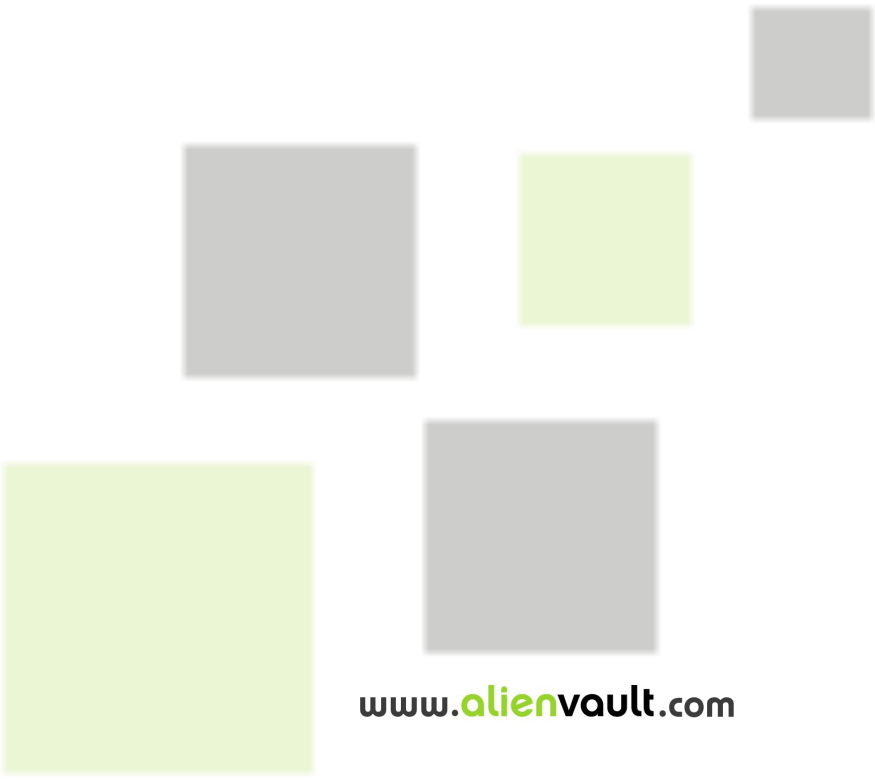
alienvault
creators of ossim

Collecting Windows logs using Snare



1 Introduction

This manual explains how to configure Snare to send Windows logs to AlienVault. A snare agent (installed in Windows machines) sends logs to the AlienVault Sensor which parses and forwards the events to the AlienVault Server (SIEM or Logger).

2 Download required software

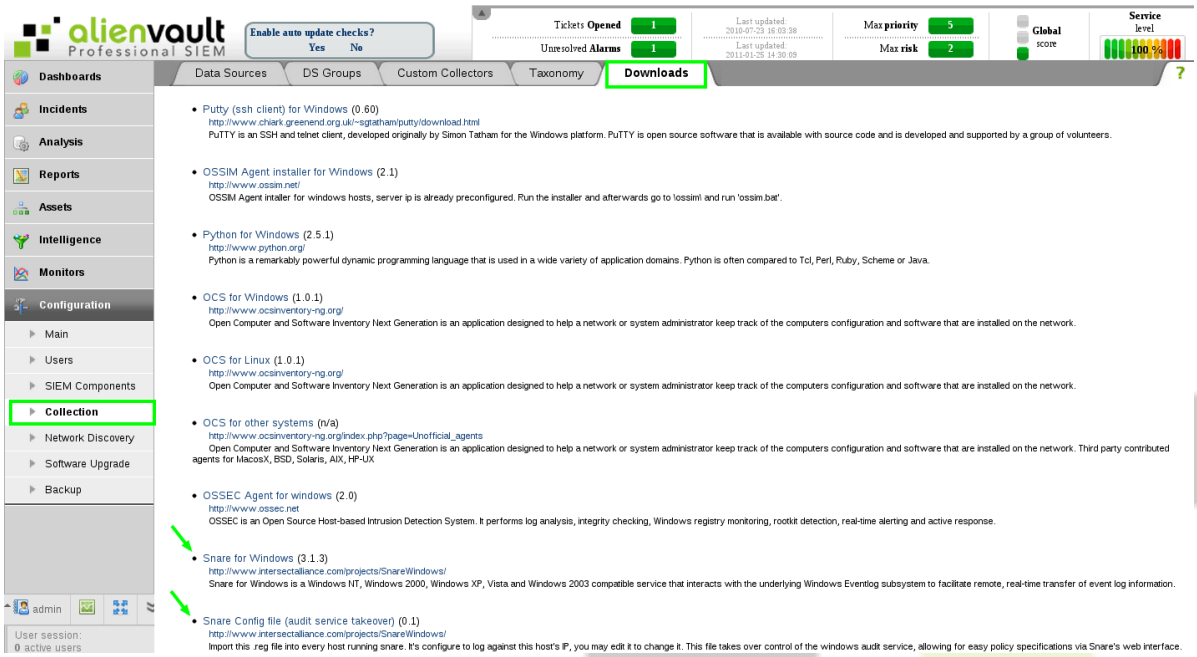
Download the Snare agent from the your AlienVault Web Interface (Version higher than 3.0)

```
Configuration -> Collection -> Downloads
```

Or to (Previous versions):

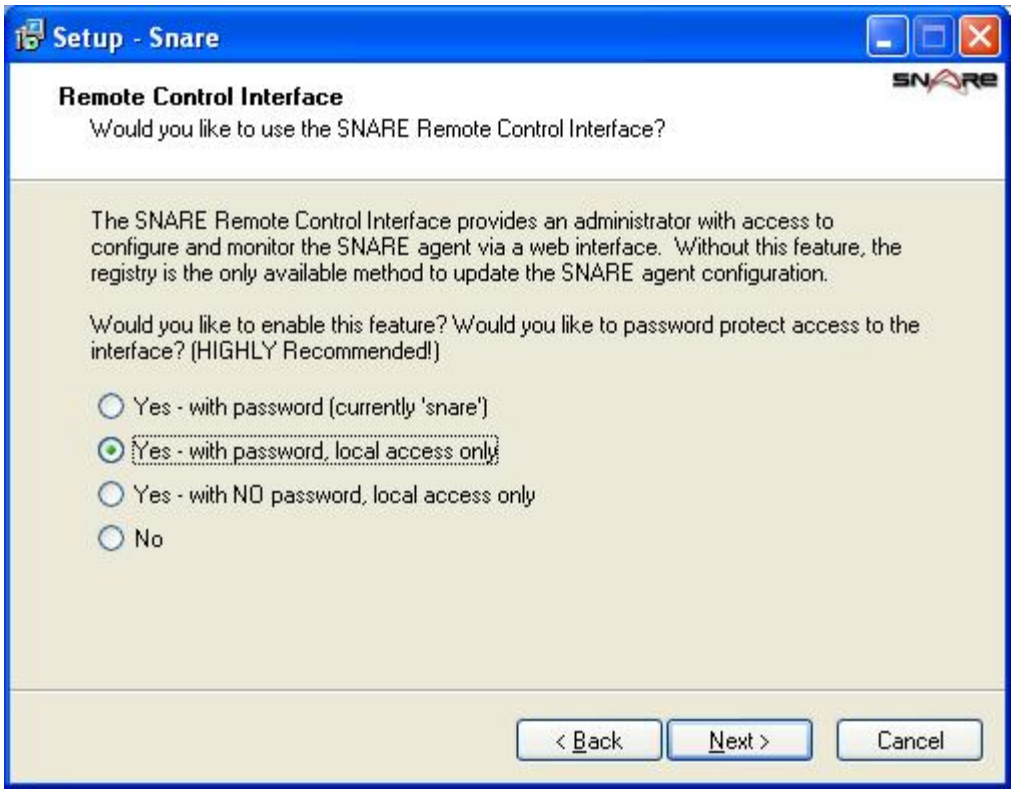
```
Tools -> Downloads ->
```

And download the two files shown in the image below



3 Installing software in windows

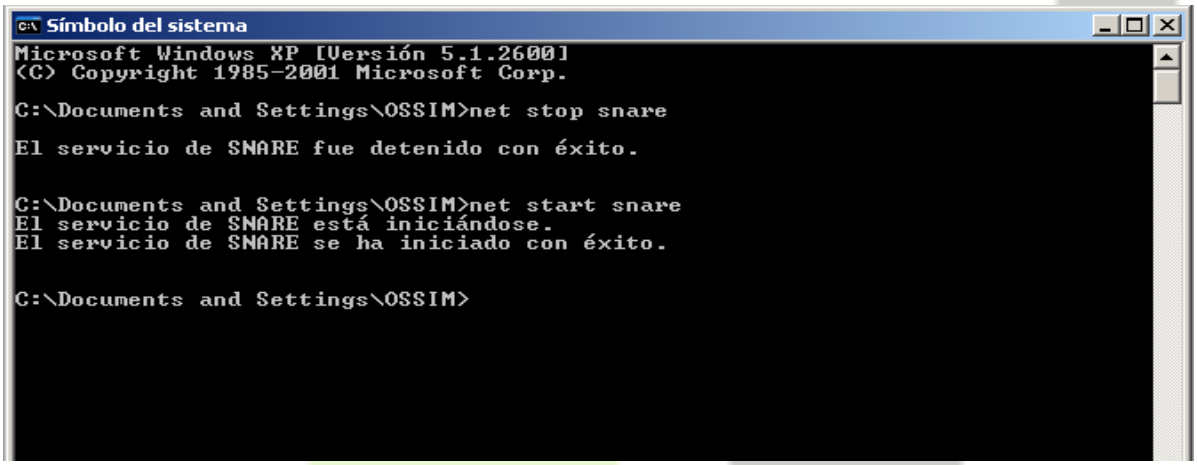
1. Execute the file *SnareSetup-3.1.3-MultiArch.exe* and follow the installer instructions. Is recommended change the default option of Remote Control Interface to "Yes – with password, local access only". The password will be able to change later.



2. When the installation is completed you should edit snare_takeover.reg and check that Destination value is correct (it should be your ossim-server ip).

3. Execute snare_takeover.reg.

4. Restart snare service:

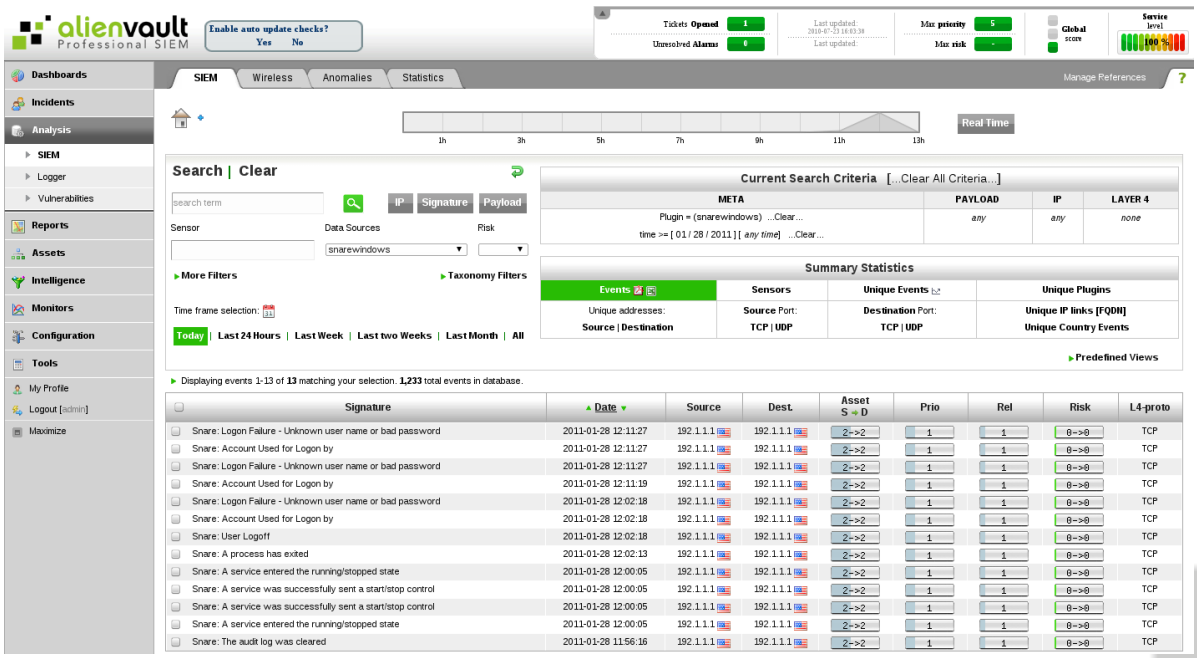


4 Configuring AlienVault

1. Enable snare plugin using ossim-setup:
   1.1. Connect to your AlienVault Sensor using SSH
   1.2. Execute "ossim-setup"
   1.3. Go to "(5) Change Sensor Settings"
   1.4. Go to "(3) Select detector plugins"
   1.5. Select "Snare" and Accept
   1.6. Select "Save and exit"
2. Add the windows ip and host to /etc/hosts file
3. Restart ossim-agent:

```
root@ossim:~# /etc/init.d/ossim-agent restart
```

That's all. Now you can view the Windows events at the framework.



5 Snare plugin

```
username={$username}
userdata1={$userdata1}

[z-snare-ossim-format-really-fallthrough]
#Feb 20 14:16:57 10.186.64.58 ^A MSWinEventLog;1;Security;466;Tue Feb 20 14:17:17
2007;538;Security;Administrador;User;Success Audit;QUICKSILVER-0JM08ZRD;Inicio/cierre de
sesióCierre de sesióe usuario:    ^INombre de usuario:^IAdministrador
^IDominio:^I^IQUICKSILVER-0JM08ZRD    ^IId. de inicio de sesióI^I(0x0,0x20E0FA)    ^ITipo de
inicio de sesióI7    ;61
event_type=event
regexp="^(?P<date>\w+\s+\d{1,2}\s\d\d:\d\d:\d\d)\s+(?P<sensor>\S+)\s+.*MSWinEventLog(;|#011)\d
+(;|#011)\w+(;|#011)\d+(;|#011)(?P<date2>\w+\s+\w+\s+\d{1,2}\s\d\d:\d\d:\d\d\s+\d+)(;|#011)(?P
<plugin_sid>\d+)(;|#011)[^(;|#011)]+(;|#011)(?P<username>[^(;|#011)]+)(;|#011)[^(;|#011)]+(;|#
011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)[^(;|#011)]+(?P<userdata1>.*)$"
date={normalize_date($date)}
sensor={resolv($sensor)}
src_ip={resolv($sensor)}
dst_ip={resolv($sensor)}
plugin_id=1518
plugin_sid={$plugin_sid}
username={$username}
userdata1={$userdata1}



[snare-ossim-format-1]
#Feb  8 16:48:22 10.186.64.58 ^A MSWinEventLog;0;Security;4;Thu Feb 08 16:48:25
2007;592;Security;Administrador;User;Success Audit;QUICKSILVER-0JM08ZRD;Seguimiento
detallado;;Se ha creado un proceso:    ^IId. de proceso:^I^I^I980    ^INombre de archivo de
imagen:^I\WINNT\system32\CMD.EXE    ^IId. de proceso creador:^I^I984 ^INombre de
usuario:^I^I^IAdministrador    ^IDominio:^I^I^I^IQUICKSILVER-0JM08ZRD ^IId. de inicio de
sesi\xf3n:^I^I(0x0,0xD237)    ;1
event_type=event
regexp="^(?P<date>\w+\s+\d{1,2}\s\d\d:\d\d:\d\d)\s+(?P<sensor>\S+)\s+.*MSWinEventLog(;|#011)\d
+(;|#011)\w+(;|#011)\d+(;|#011)(?P<date2>\w+\s+\w+\s+\d{1,2}\s\d\d:\d\d:\d\d\s+\d+)(;|#011)(?P
<plugin_sid>\d+)(;|#011)[^(;|#011)]+(;|#011)(?P<username>[^(;|#011)]+)(;|#011)[^(;|#011)]+(;|#
011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)(;|#011)[^:]+:\s{4}[^:]+:\D+(?
P<pid>\d+)\s{4}[^:]+:(?P<process_name>[^\s{4}]+)\s{4}[^:]+:\D+(?P<ppid>\d+)\s{4}[^:]+:([^\s{4}
]+)\s{4}(.*)$"
date={normalize_date($date)}
sensor={resolv($sensor)}
src_ip={resolv($sensor)}
dst_ip={resolv($sensor)}
plugin_id=1518
plugin_sid={$plugin_sid}
username={$username}
filename={$process_name}
userdata1=date2:{$date2}
userdata2=pid:{$pid},ppid:{$ppid}

[snare-ossim-format-2]
#Feb 20 15:03:05 host_sample.int.whatever.corp.local host_samepl.int.whatever.corp.local
MSWinEventLog;1;System;1997;Tue Feb 20 15:04:08
2007;10;Print;SYSTEM;User;Information;AMRERSFP01;None;;Document 241, Sample file.pdf owned by
Kobi was printed on PRINTER1 via port JK82.  Size in bytes: 7597  pages printed: 0  ;146
event_type=event
```

```
regexp="^(?P<date>\w+\s+\d{1,2}\s\d\d:\d\d:\d\d)\s+(?P<sensor>\S+)\s+.*MSWinEventLog(;|#011)\d
+(;|#011)[^(;|#011)]+(;|#011)\d+(;|#011)(?P<date2>\w+\s+\w+\s+\d{1,2}\s\d\d:\d\d:\d\d\s+\d+)(;
|#011)(?P<plugin_sid>\d+)(;|#011)[^(;|#011)]+(;|#011)(?P<username>[^(;|#011)]+)(;|#011)[^(;|#0
11)]+(;|#011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)(;|#011)Document\s+(?
P<doc_number>\d+),\s+(?P<filename>.*)\s+owned by\s+(?P<owner_name>\S+).*was printed
on\s+(?P<printer_name>.*)\s+via port"
date={normalize_date($date)}
sensor={resolv($sensor)}
src_ip={resolv($sensor)}
dst_ip={resolv($printer_name)}
plugin_id=1518
plugin_sid={$plugin_sid}
username={$username}
filename={$filename}

[snare-ossim-format-3]
#Feb 20 15:03:05 host_sample.int.whatever.corp.local host_samepl.int.whatever.corp.local
MSWinEventLog;1;System;1997;Tue Feb 20 15:04:08
2007;10;Print;SYSTEM;User;Information;AMRERSFP01;None;;Document 241, Sample file.pdf owned by
DK (192.1682.44.31) was printed on PRINTER1 via port JK82.  Size in bytes: 7597  pages
printed: 0  ;146
event_type=event
regexp="^(?P<date>\w+\s+\d{1,2}\s\d\d:\d\d:\d\d)\s+(?P<sensor>\S+)\s+.*MSWinEventLog(;|#011)\d
+(;|#011)[^(;|#011)]+(;|#011)\d+(;|#011)(?P<date2>\w+\s+\w+\s+\d{1,2}\s\d\d:\d\d:\d\d\s+\d+)(;
|#011)(?P<plugin_sid>\d+)(;|#011)[^(;|#011)]+(;|#011)(?P<username>[^(;|#011)]+)(;|#011)[^(;|#0
11)]+(;|#011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)[^(;|#011)]+(;|#011)(;|#011)Document\s+(?
P<doc_number>\d+),\s+(?P<filename>.*)\s+owned
by\s+(?P<owner_name>\S+)\s+(?P<owner_ip>\S+)\s+was printed on\s+(?P<printer_name>.*)\s+via
port"
date={normalize_date($date)}
sensor={resolv($sensor)}
src_ip={resolv($owner_ip)}
dst_ip={resolv($printer_name)}
plugin_id=1518
plugin_sid={$plugin_sid}
username={$username}
filename={$filename}
```

6 How to configure Rsyslog to separate Snare logs

AlienVault uses Rsyslog to receive logs from other devices, Rsyslog can be configured to separate logs using filters and regular expressions.

In order to filter events coming from an application or device the best option would be creating a new file (With .conf extension) inside the following directory:

```
/etc/rsyslog.d/
```

The following properties can be used to create filters.

Property	Description
msg	The MSG part of the message
rawmsg	The message exactly as it was received from the socket. Should be useful for debugging.
hostname	Hostname from the message
fromhost-ip	The same as fromhost, but alsways as an IP address. Local inputs (like imklog) use 127.0.0.1 in this property.
programname	The "static" part of the tag, as defined by BSD syslogd. For example, when TAG is "named[12345]", programname is "named".

You can use the following comparators to make your filter

Comparator	Description
contains	Checks if the string provided in value is contained in the property. There must be an exact match, wildcards are not supported.
isempty	Checks if the property is empty. The value is discarded. This is especially useful when working with normalized data, where some fields may be populated based on normalization result.
isequal	Compares the "value" string provided and the property contents. These two values must be exactly equal to match. The difference to contains is that contains searches for the value anywhere inside the property value.
startswith	Checks if the value is found exactly at the beginning of the property value.
regex	Compares the property against the provided POSIX BRE regular expression.

To store Snare events in a different file, it is possible to use the property **fromhost-ip**, E.g.:

1. Create the a new Rsyslog configuration file

```
root@ossim:~# vim /etc/rsyslog.d/snare.conf
```

2. Write your Snare filter:

```
if $fromhost-ip isequal <snare-ip> then -/var/log/snare.log
& ~  # This line means discard after match
```

3. Reload rsyslog configuration:

```
root@ossim:~# /etc/init.d/rsyslog reload
```

Once the incoming Snare events are been stored in the new file, change the location property in the snare plugin configuration file

/etc/ossim/agent/plugins/snarewindows.cfg

```
location = /var/log/snare.log
```

7 Configure Log rotation

A Log rotation policy must be configured for every new log file, otherwise the size of the log files will grow indefinitely. AlienVault uses Logrotate to configure the Log rotation policies.

To create a new logrotate configuration file follow the next steps:

1. Create a new logrotate file

```
root@ossim:~# vim /etc/logrotate.d/snare.conf
```

2. The file should look like as follows:

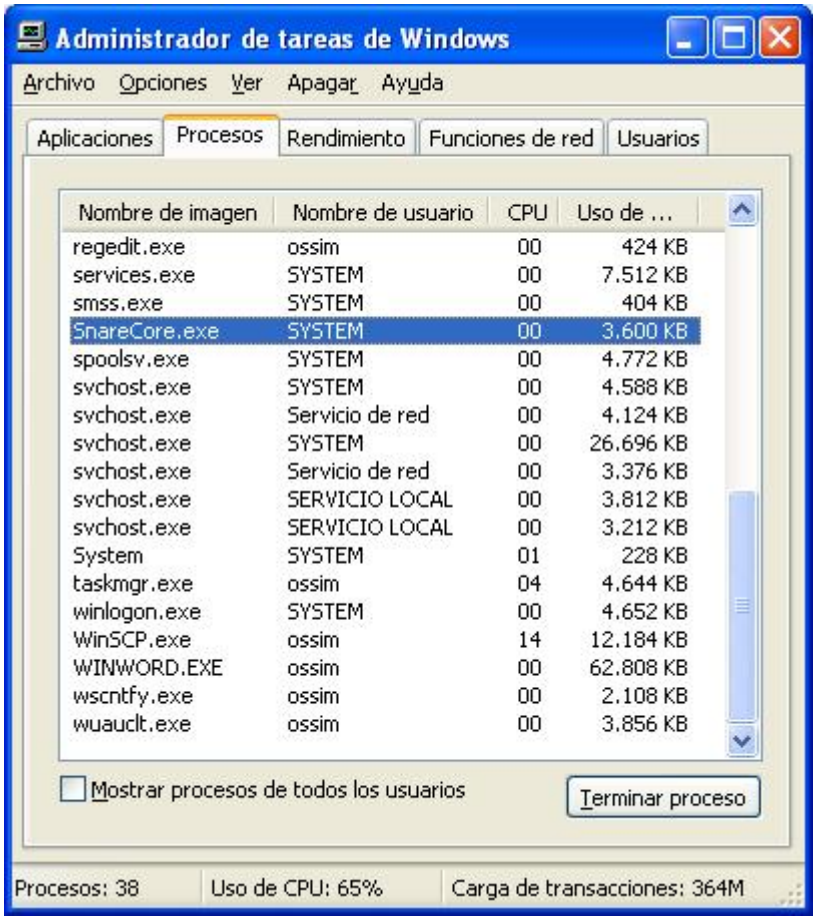
```
/var/log/snare.log {
        daily                   # rotate daily
        missingok               # if file doesn't exist continue
        rotate 7                # Save the last 7 logs
        compress                # Compress the log
        notifempty              # if log is empty, the log don't rotat

}
```

8 Troubleshooting

8.1 Find out if your Snare is sending logs

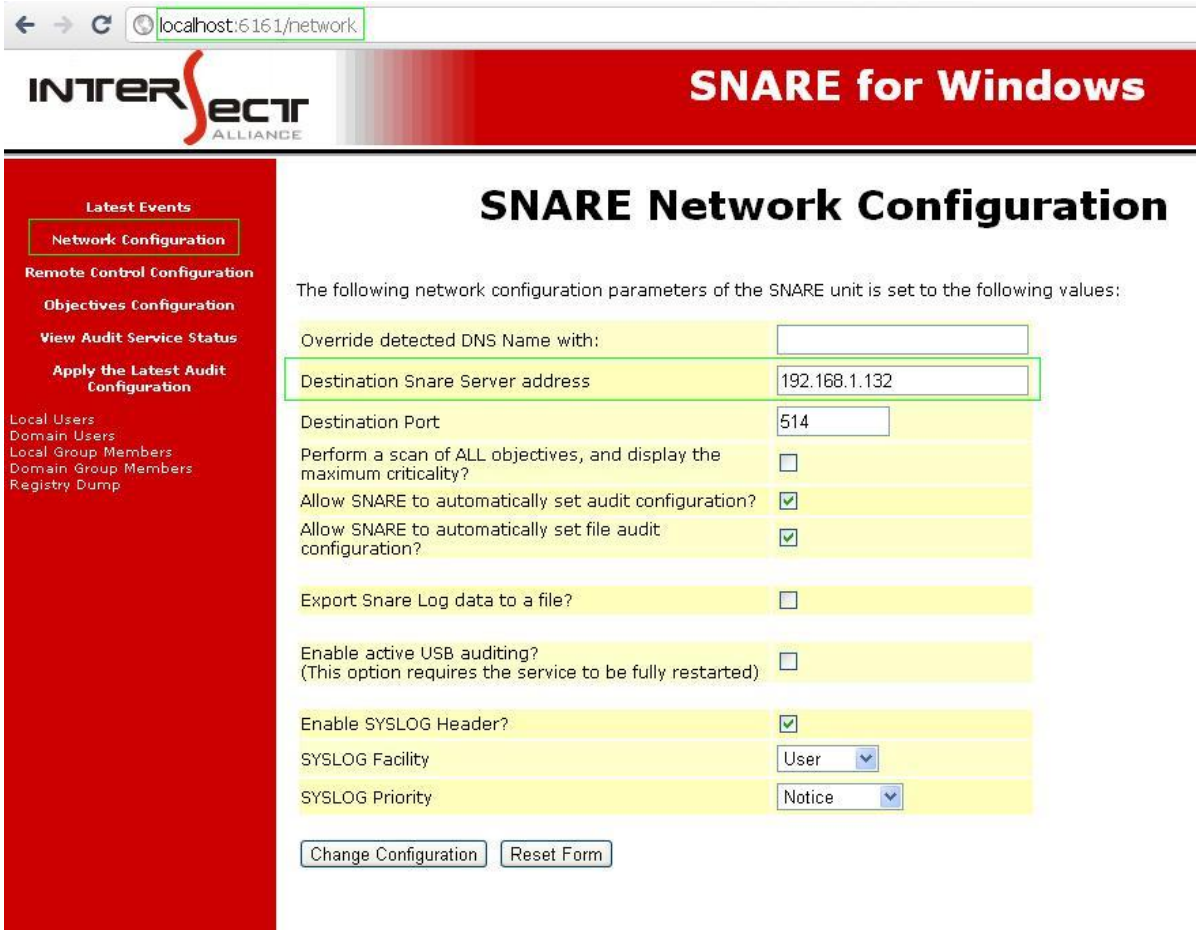
In your Windows box check that the SnareCore.exe process is running. To do that execute **taskmgr** , go to the Process tab and search it.



Also check that Snare is sending events to the IP address of the AlienVault Sensor.

To check this point your browser to http://localhost:6161

In the configuration go to Network configuration and check the value of the field "Destination Snare Server address".



8.2 How to check if Syslog is receiving Snare events.

If you have not configured Rsyslog to save the events into a different file run the following command:

```
root@ossim:~# tail -f /var/log/syslog
```

If you have followed the previous steps to store the Snare events in a different file run the following command:

```
root@ossim:~# tail -f /var/log/snare.log
```

8.3 How to check if agent is receiving events.

The following commands shows the events that are being collected by the AlienVault Sensor

```
root@ossim:~# tail -f  /var/log/ossim/agent.log
```

8.4 How to check if server is receiving events.

The following command shows the events that are being collected by the AlienVault Server

```
root@ossim:~# tail -f  /var/log/ossim/server.log
```

8.5 How to check if Snare plug-in is enabled after ossim-reconfig running ossim-reconfig

You can run the following command to make sure that the plugin is enabled.

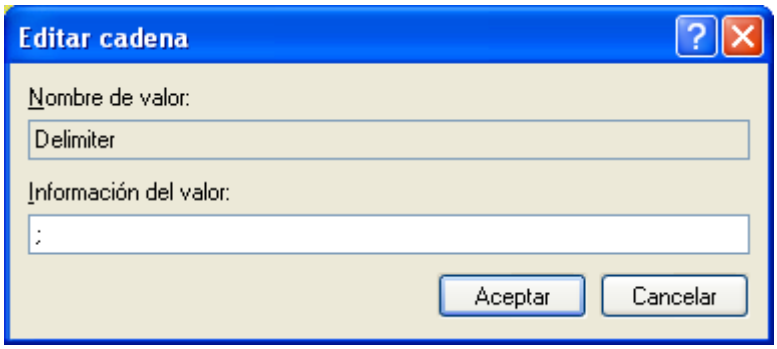
```
root@ossim:~# cat /etc/ossim/agent/config.cfg | grep snare
snare=/etc/ossim/agent/plugins/snare.cfg
```

8.6 Windows logs delimiter

Windows uses by default the space character to separate the different fields in the log, you will need to change this delimiter and use ";" to allow AlienVault collecting events.

This delimiter can be changed in the Windows registry using the **regedit** tool.

```
HKEY_LOCAL_MACHINE/SOFTWARE/InterSect Alliance/AuditService/Config/Delimiter
```



After changing the delimiter you will need to restart the Snare Service.