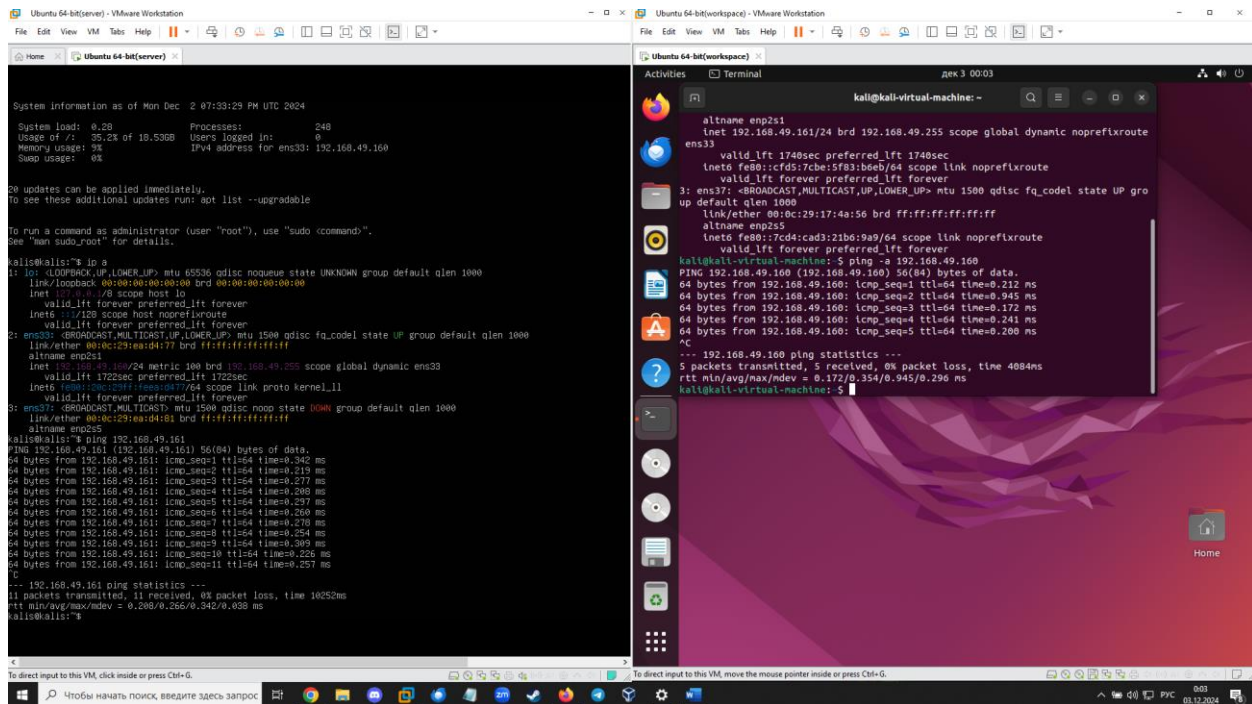
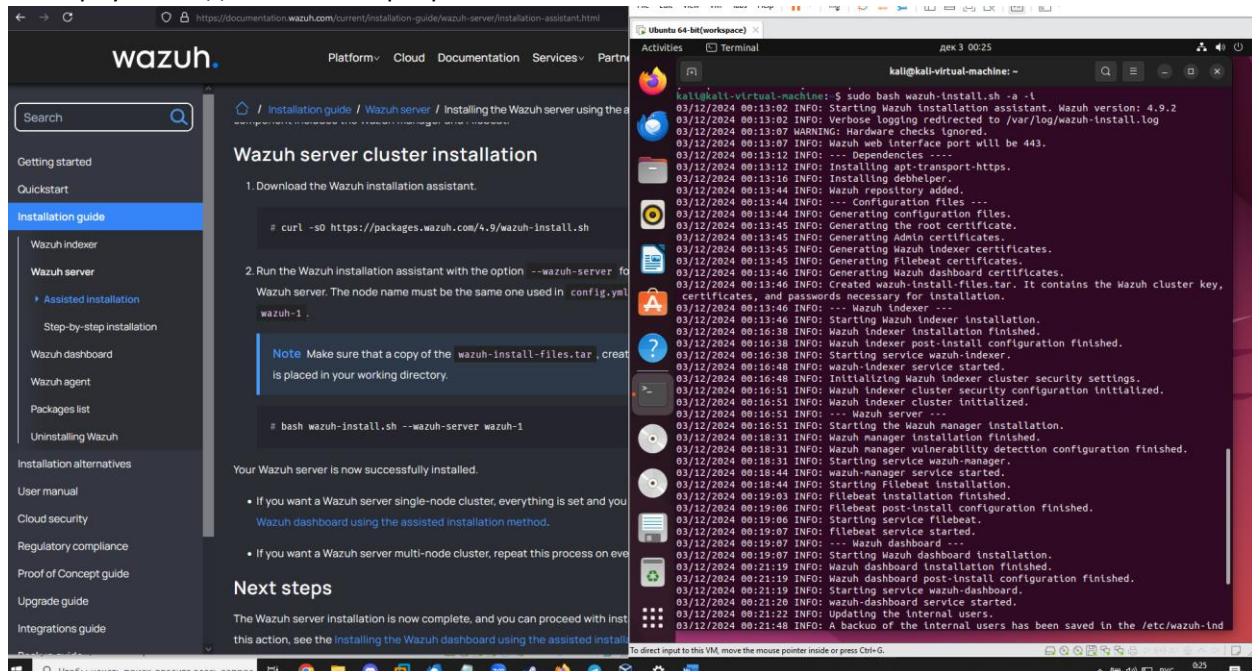


ΠΡ3 5 Threat Hunting

- 1) Разверните виртуальные машины (минимум 2 – сервер и агенты)
- 2) Обеспечить между ними сетевой обмен.



- 3) Развернуть на одной из ВМ сервер Wazuh



```

03/12/2024 00:21:18 INFO: A backup of the internal users has been saved in the /etc/wazuh and
exer/internalusers-backup folder.
03/12/2024 00:22:05 INFO: The filebeat.yml file has been updated to use the Filebeat Keystore
username and password.
03/12/2024 00:22:40 INFO: Initializing Wazuh dashboard web application.
03/12/2024 00:22:40 INFO: Wazuh dashboard web application not yet initialized. Waiting...
03/12/2024 00:22:56 INFO: Wazuh dashboard web application not yet initialized. Waiting...
03/12/2024 00:23:12 INFO: Wazuh dashboard web application not yet initialized. Waiting...
03/12/2024 00:23:27 INFO: Wazuh dashboard web application initialized.
03/12/2024 00:23:27 INFO: --- Summary ---
03/12/2024 00:23:27 INFO: You can access the web interface https://<wazuh-dashboard-ip>:443
User: admin
Password: pS4af.kl2SH.zIhc5iv74SRqdvYobiF2
03/12/2024 00:23:27 INFO: Installation finished.
kali@kali-virtual-machine:~$

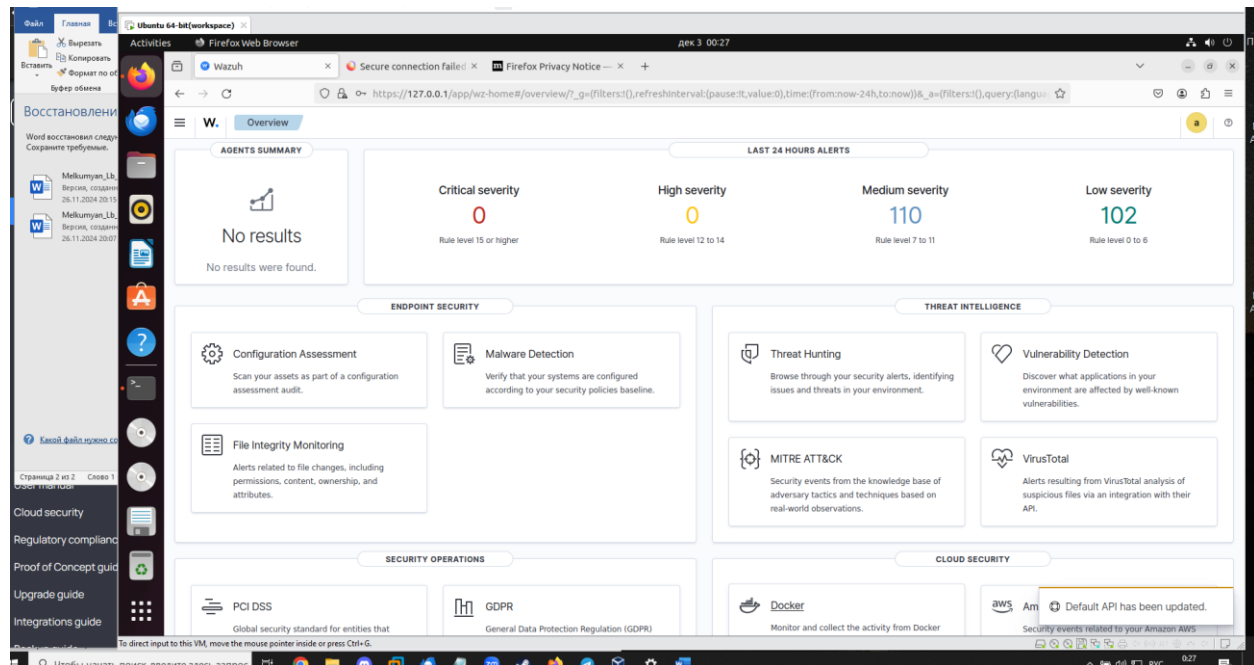
```

ut to this VM, move the mouse pointer inside or press Ctrl+G.

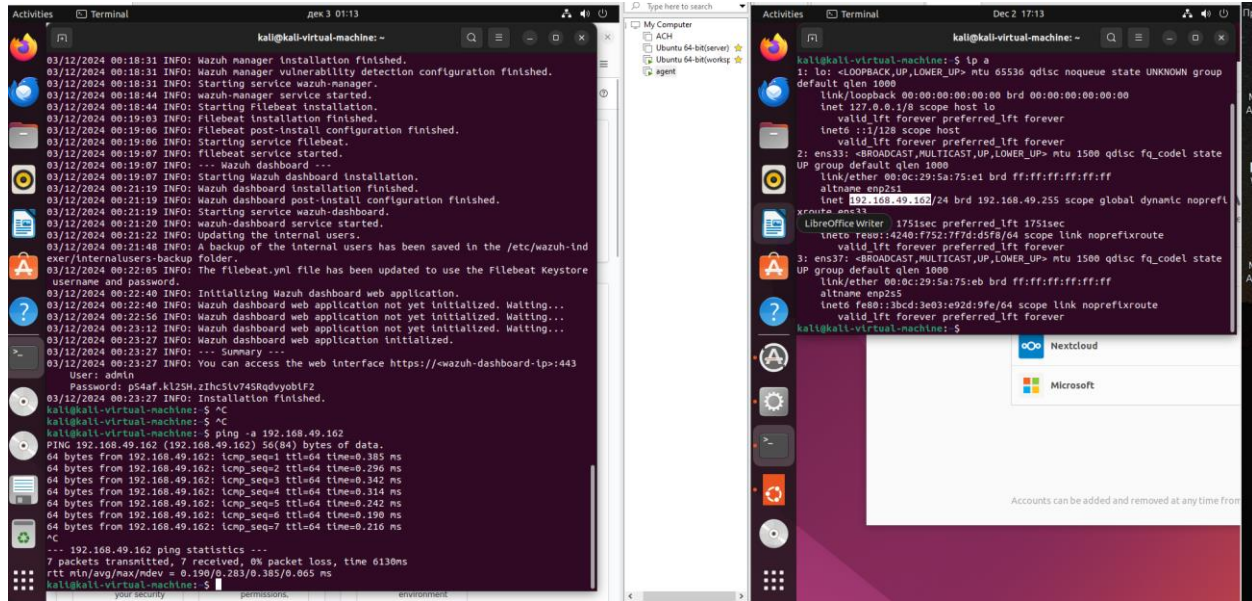
User: admin

Password: pS4af.kl2SH.zIhc5iv74SRqdvYobiF2

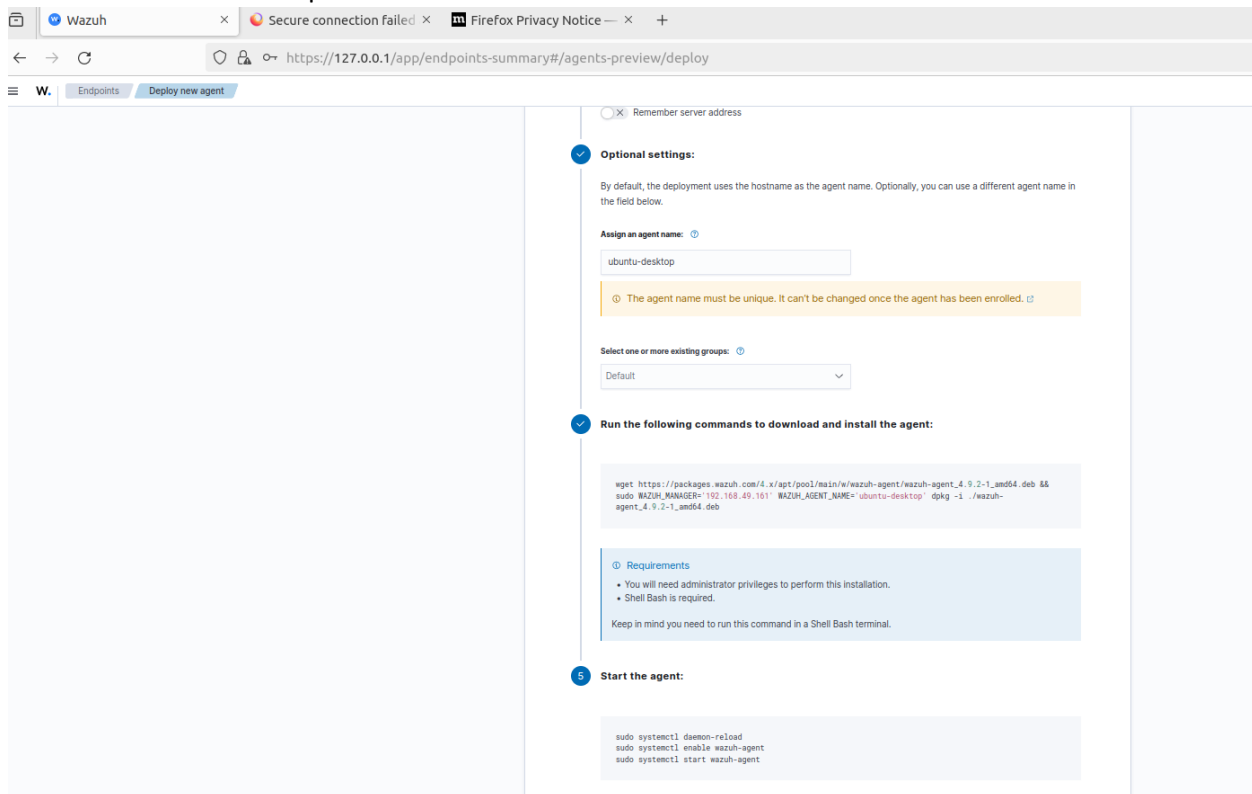
Зашли на сам Wazuh



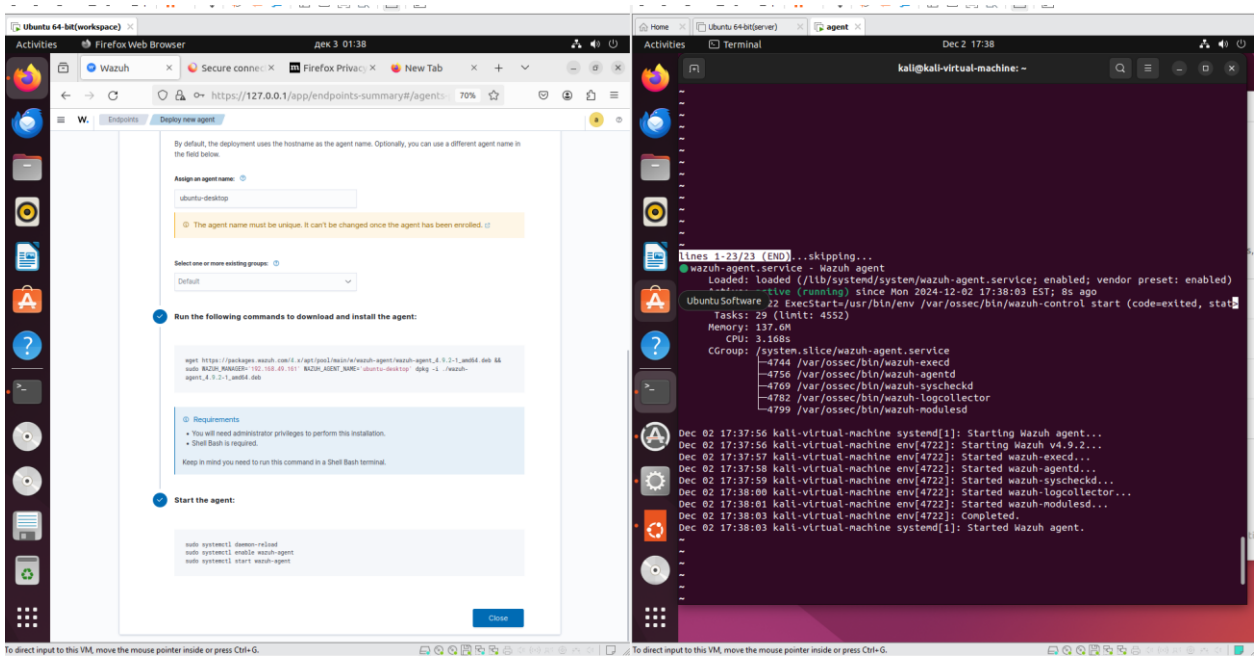
Еще раз проверил сетевую связанность между машинами потому что будучи сонным установил не туда,и пришлось еще одну машину разворачивать



4) Подключите агента используя документацию Устанавливаю агента через Wazuh



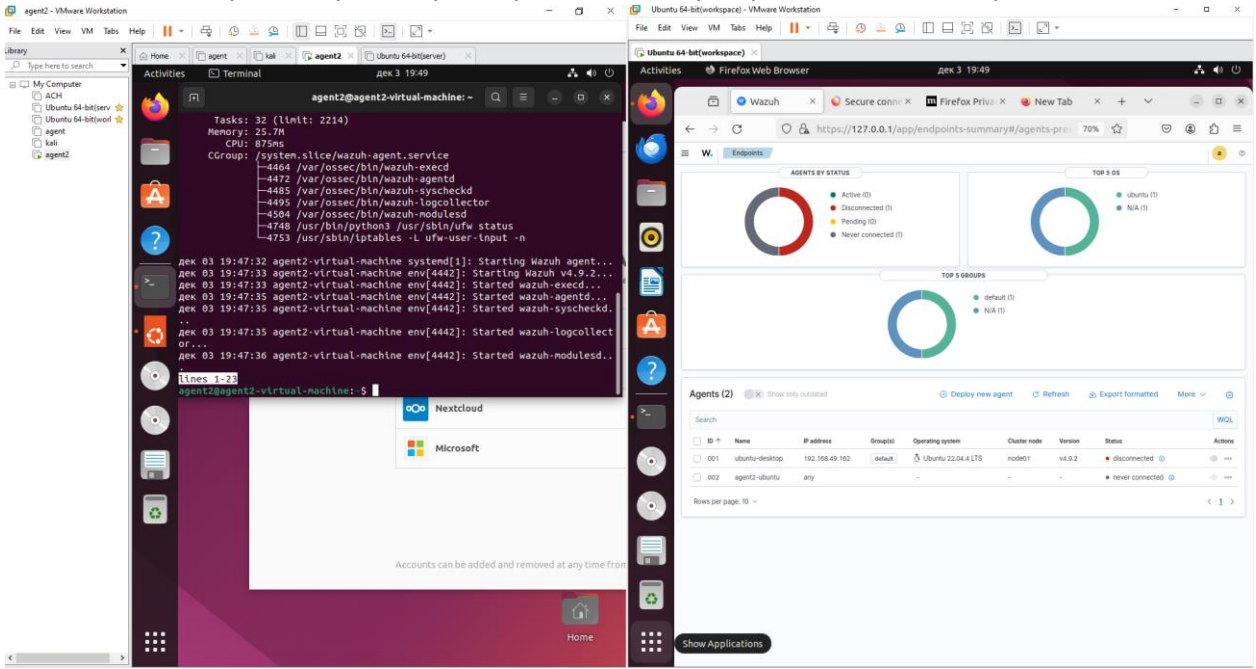
Ввели все команды и установили



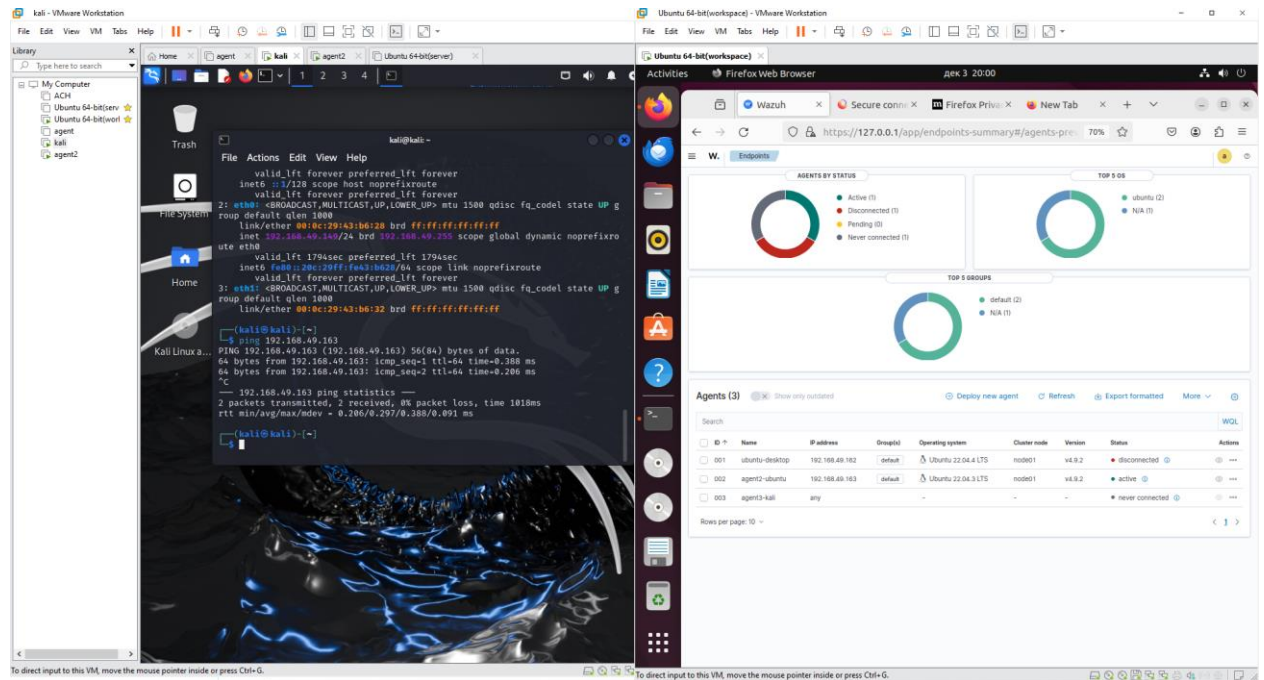
Видим что сервер «увидел» агента

User: admin
Password: pS4af.kl2SH.zlhC5iv74SRqdvyobiF2

Добавил еще одну машину потому что прошлая почему-то решила больше не работать



Добавил еще кали линукс,его события тоже можно будет посмотреть



Скачали сурикату

```
agent2@agent2-virtual-machine:~$ sudo apt install suricata -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libevent-2.1-7 libevent-core-2.1-7 libevent-pthreads-2.1-7
  libhiredis0.14 libhttp2 libhyperscan5 liblua5.1-2
  liblua5.1-common libnet1 libnetfilter-log1 libnetfilter-queue1
  oinkmaster python3-simplejson snort-rules-default suricata-update
Suggested packages:
  snort | snort-pgsql | snort-mysql libtcmalloc-minimal4
The following NEW packages will be installed:
  libevent-2.1-7 libevent-core-2.1-7 libevent-pthreads-2.1-7
  libhiredis0.14 libhttp2 libhyperscan5 liblua5.1-2
  liblua5.1-common libnet1 libnetfilter-log1 libnetfilter-queue1
  oinkmaster python3-simplejson snort-rules-default suricata
  suricata-update
0 upgraded, 16 newly installed, 0 to remove and 321 not upgraded.
Need to get 5 677 kB of archives.
After this operation, 27,8 MB of additional disk space will be used.
Get:1 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libhyperscan5 amd64 5.4.0-2 [2 485 kB]
Get:2 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 python3-simplejson amd64 3.17.6-1build1 [54,7 kB]
Get:3 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 libevent-2.1-7 amd64 2.1.12-stable-1build3 [148 kB]
Get:4 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 libevent-core-2.1-7 amd64 2.1.12-stable-1build3 [93,9 kB]
Get:5 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 libevent-pthreads-2.1-7 amd64 2.1.12-stable-1build3 [7 642 B]
Get:6 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libhiredis0.14 amd64 0.14.1-2 [32,8 kB]
Get:7 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libhttp2 amd64 1:0.5.39-1 [70,5 kB]
Get:8 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 liblua5.1-common all 2.1.0-beta3+dfsg-6 [44,3 kB]
Get:9 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 liblua5.1-2 amd64 2.1.0-beta3+dfsg-6 [238 kB]
Get:10 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 libnet1 amd64 1.1.6+dfsg-3.1build3 [46,9 kB]
Get:11 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libnetfilter-log1 amd64 1.0.2-1 [13,5 kB]
Get:12 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libnetfilter-queue1 amd64 1.0.5-2 [14,4 kB]
```

Установили правила

```
agent2@agent2-virtual-machine:~$ cd /etc/su
sudoers.d/ suricata/
agent2@agent2-virtual-machine:~$ cd /etc/suricata/
agent2@agent2-virtual-machine:/etc/suricata$ ls
classification.config  rules  threshold.config
reference.config       suricata.yaml
agent2@agent2-virtual-machine:/etc/suricata$ nano suricata.yaml
agent2@agent2-virtual-machine:/etc/suricata$ sudo su
root@agent2-virtual-machine:/etc/suricata# nano suricata.yaml
root@agent2-virtual-machine:/etc/suricata# apt install suricata-update
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
suricata-update is already the newest version (1.2.3-1).
suricata-update set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 321 not upgraded.
root@agent2-virtual-machine:/etc/suricata# suricata-update
3/12/2024 -- 20:21:04 - <Info> -- Using data-directory /var/lib/suricata.
3/12/2024 -- 20:21:04 - <Info> -- Using Suricata configuration /etc/suricata/suricata.yaml
3/12/2024 -- 20:21:04 - <Info> -- Using /etc/suricata/rules for Suricata provided rules.
3/12/2024 -- 20:21:04 - <Info> -- Found Suricata version 6.0.4 at /usr/bin/suricata.
3/12/2024 -- 20:21:04 - <Info> -- Loading /etc/suricata/suricata.yaml
3/12/2024 -- 20:21:04 - <Error> -- [ERRCODE: SC_ERR_CONF_YAML_ERROR(242)] - ERROR: Invalid configuration file.
3/12/2024 -- 20:21:04 - <Error> -- [ERRCODE: SC_ERR_CONF_YAML_ERROR(242)] - The configuration file must begin with the following two lines: %YAML
1.1 and ---
root@agent2-virtual-machine:/etc/suricata# nano suricata.yaml
root@agent2-virtual-machine:/etc/suricata# suricata-update
3/12/2024 -- 20:21:31 - <Info> -- Using data-directory /var/lib/suricata.
3/12/2024 -- 20:21:31 - <Info> -- Using Suricata configuration /etc/suricata/suricata.yaml
3/12/2024 -- 20:21:31 - <Info> -- Using /etc/suricata/rules for Suricata provided rules.
3/12/2024 -- 20:21:31 - <Info> -- Found Suricata version 6.0.4 at /usr/bin/suricata.
3/12/2024 -- 20:21:31 - <Info> -- Loading /etc/suricata/suricata.yaml
3/12/2024 -- 20:21:31 - <Info> -- Disabling rules for protocol http2
3/12/2024 -- 20:21:31 - <Info> -- Disabling rules for protocol modbus
3/12/2024 -- 20:21:31 - <Info> -- Disabling rules for protocol dnp3
```

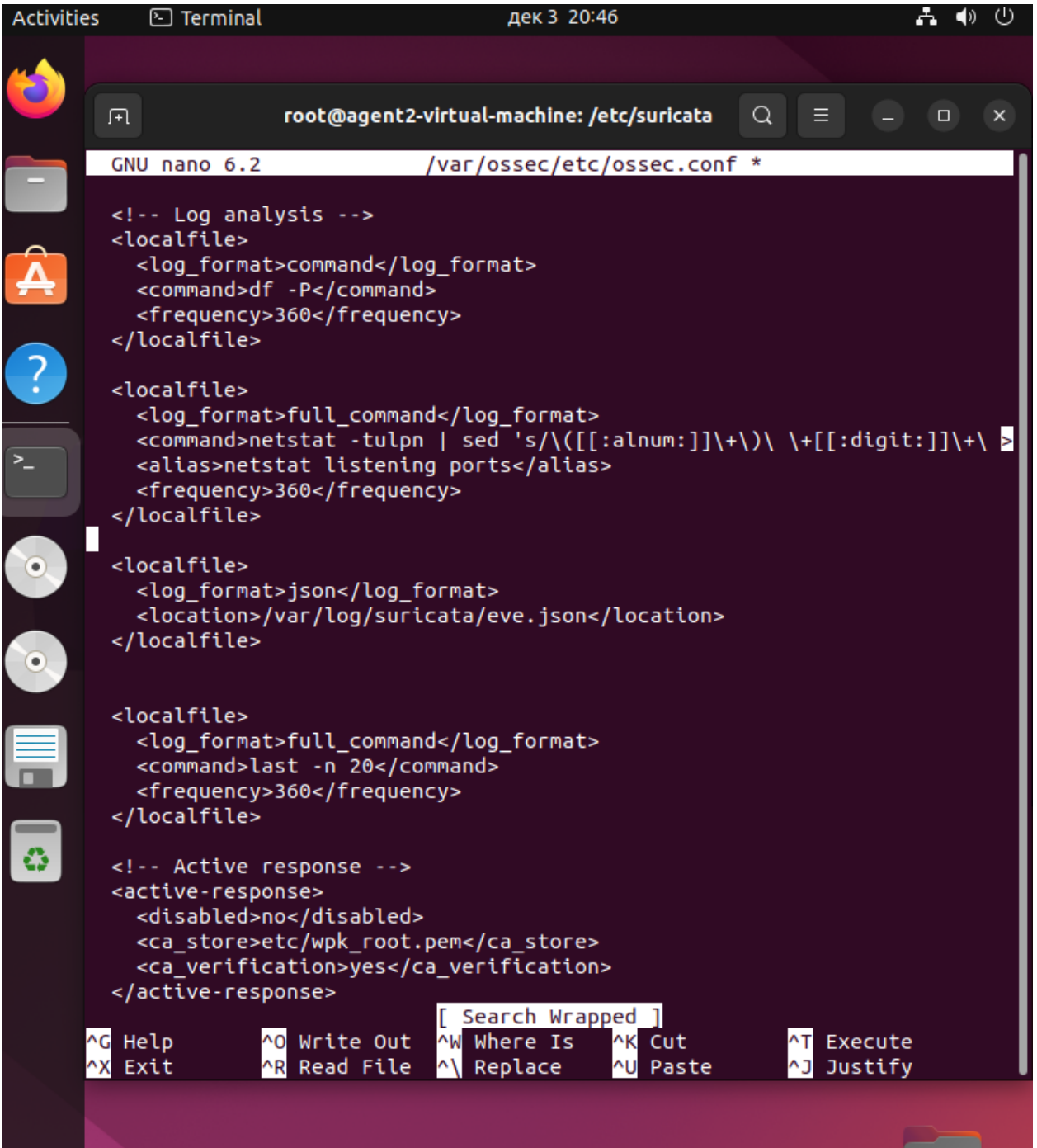
Установили на агенте чтобы была интеграция событий с сурикатой в вазух (брал json)

Обновляю сурикату, в связи с многочисленными ошибками

```
... from the engine when the rule configuration on direct rule sets with signa
ure file "signatures.rules", run the command as:

suricata -c suricata.yaml -s signatures.rules -i eth0

root@agent2-virtual-machine:/etc/suricata# sudo yum install suricata
sudo: yum: command not found
root@agent2-virtual-machine:/etc/suricata# sudo apt install suricata
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer requ
ired:
  libnetfilter-log1 oinkmaster python3-simplejson snort-rules-default
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libhttp2 liblzma-dev
Suggested packages:
  liblzma-doc
The following NEW packages will be installed:
  liblzma-dev
The following packages will be upgraded:
  libhttp2 suricata
2 upgraded, 1 newly installed, 0 to remove and 321 not upgraded.
Need to get 3 400 kB of archives.
After this operation, 4 049 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 liblzma-dev amd
64 5.2.5-2ubuntu1 [159 kB]
Get:2 https://ppa.launchpadcontent.net/oisf/suricata-stable/ubuntu jammy/m
ain amd64 libhttp2 amd64 1:0.5.49-0ubuntu2 [76,0 kB]
Get:3 https://ppa.launchpadcontent.net/oisf/suricata-stable/ubuntu jammy/m
ain amd64 suricata amd64 1:7.0.7-0ubuntu5 [3 165 kB]
Fetched 3 400 kB in 9s (365 kB/s)
[✓]Reading database ... 95%
```

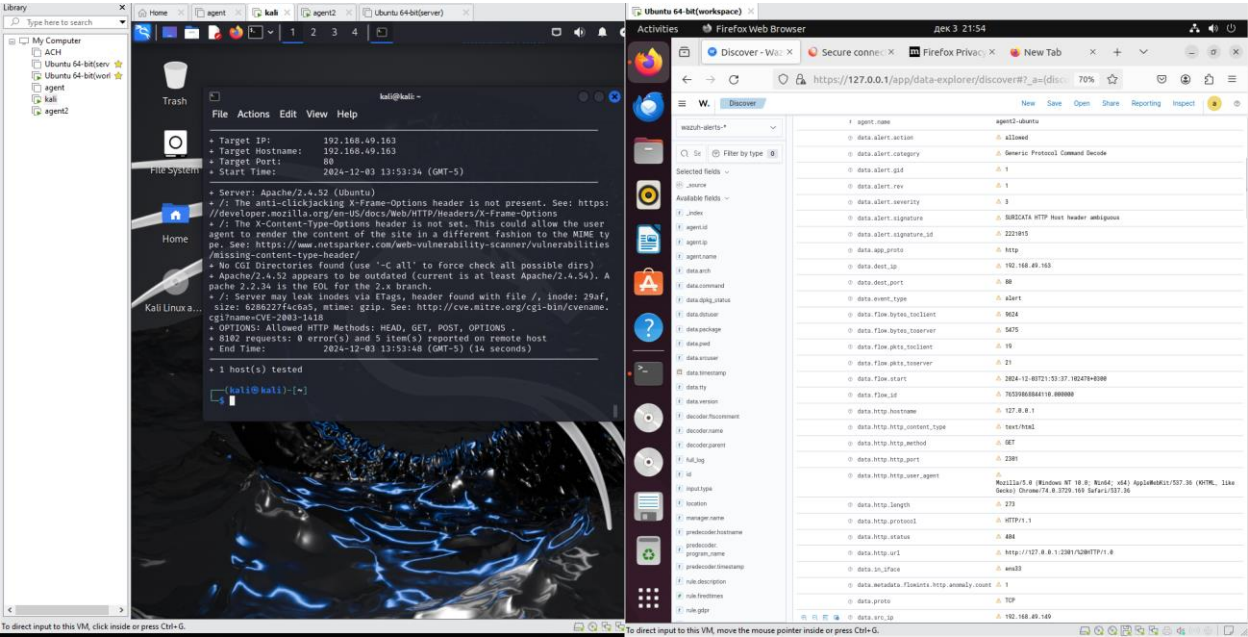


o direct input to this VM, move the mouse pointer inside or press Ctrl+G.

Это я отправлял пакет с кали на убунту

#	agent.name	agent2-ubuntu
🕒	data.alert.action	⚠ allowed
🕒	data.alert.gid	⚠ 1
🕒	data.alert.rev	⚠ 1
🕒	data.alert.severity	⚠ 3
🕒	data.alert.signature	⚠ ICMP packet detected
🕒	data.alert.signature_id	⚠ 1000001
🕒	data.dest_ip	⚠ ff02:0000:0000:0000:0000:0000:0000:0002
🕒	data.dest_port	⚠ 0
🕒	data.event_type	⚠ alert
🕒	data.flow.bytes_toclient	⚠ 0
🕒	data.flow.bytes_toserver	⚠ 62
🕒	data.flow.pkts_toclient	⚠ 0
🕒	data.flow.pkts_toserver	⚠ 1
🕒	data.flow.start	⚠ 2024-12-03T21:44:11.173128+0300
🕒	data.flow_id	⚠ 1559035840799816.000000
🕒	data.icmp_code	⚠ 0
🕒	data.icmp_type	⚠ 133
🕒	data.in_iface	⚠ ens33
🕒	data.proto	⚠ IPv6-ICMP
🕒	data.src_ip	⚠ fe80:0000:0000:0000:6400:d09a:9d2c:5297
🕒	data.src_port	⚠ 0
📅	data.timestamp	Dec 3, 2024 @ 21:44:11.173
#	decoder.name	json
#	id	1733251451.2797936
#	input.type	log
#	location	/var/log/suricata/eve.json
#	manager.name	kali-virtual-machine
#	rule.description	Suricata: Alert - ICMP packet detected
#	rule.firedtimes	13
#	rule.groups	ids, suricata
🔍	rule.id	86601

Проверка получения событий



data.timestamp	Dec 3, 2024 @ 21:53:37.129
data.tx_id	16
decoder.name	json
id	1733252024.2837840
input.type	log
location	/var/log/suricata/eve.json
manager.name	kali-virtual-machine
rule.description	Suricata: Alert - SURICATA HTTP Host header ambiguous
rule.firedtimes	23
rule.groups	ids, suricata
rule.id	86601
rule.level	3
rule.mail	false
timestamp	Dec 3, 2024 @ 21:53:44.600

Для интегрирования событий yara

```
root@agent2-virtual-machine:/etc/suricata# sudo apt update
sudo apt install yara
Hit:1 http://ru.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:3 http://ru.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:4 http://ru.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:5 https://ppa.launchpadcontent.net/oisf/suricata-stable/ubuntu jammy InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
321 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libnetfilter-log1 oinkmaster python3-simplejson snort-rules-default
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libyara8
The following NEW packages will be installed:
  libyara8 yara
0 upgraded, 2 newly installed, 0 to remove and 321 not upgraded.
Need to get 179 kB of archives.
After this operation, 499 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libyara8 amd64 4.1.3-1build1 [157 kB]
Get:2 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 yara amd64 4.1.3-1build1 [22,3 kB]
Fetched 179 kB in 1s (163 kB/s)
Selecting previously unselected package libyara8:amd64.
(Reading database ... 179991 files and directories currently installed.)
Preparing to unpack .../libyara8_4.1.3-1build1_amd64.deb ...
Unpacking libyara8:amd64 (4.1.3-1build1) ...
Selecting previously unselected package yara.
Preparing to unpack .../yara_4.1.3-1build1_amd64.deb ...
```

```
<localfile>
  <log_format>syslog</log_format>
  <location>/var/log/dpkg.log</location>
</localfile>

<log_collector>
<log>
  <location>/var/ossec/logs/yara_event.log</location>
</log>
</log_collector>
```

