Report

1.Install elasticsearch.

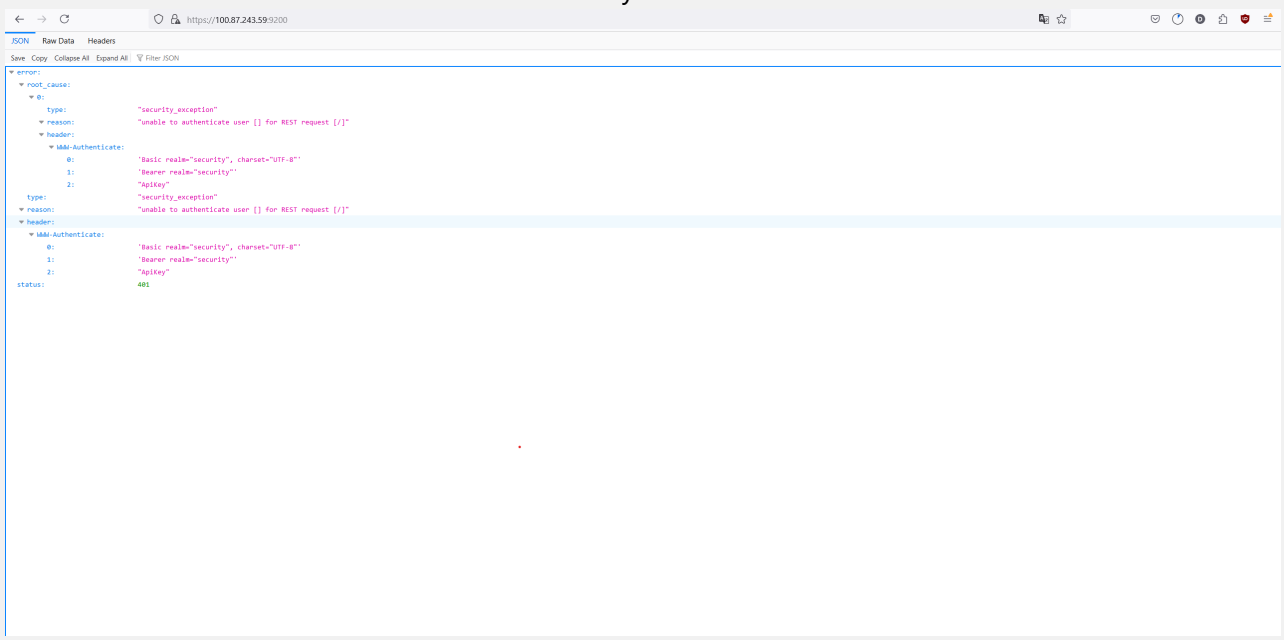
1. Install elasticsearch from apt (Just search on google).
2. Enable elasticsearch to run as service:

```
sudo systemctl daemon-reload
sudo systemctl enable elasticsearch.service
```

3. Locate to `/usr/share/elasticsearch/bin/elasticsearch-create-token -s node` to generate token for node enrollment.
4. Locate to `/usr/share/elasticsearch/bin/elasticsearch-create-token -s kibana` to generate token for kibana enrollment.
5. Edit needed information in the file `/etc/elasticsearch/elasticsearch.yml` (this step maybe require changing file permission of folder or editting under root's right) Change the following varibale:

```
cluster.name: demo
network.host: 100.87.243.59
http.host: 0.0.0.0
transport.host: 0.0.0.0
```

Noted that data and logs are stored in the following file:

> /var/lib/elasticsearch /var/log/elasticsearch 6. Noted that in the second node need to do this actions `sudo /usr/share/elasticsearch/bin/elasticsearch-reconfigure-node --enrollment-token <enrollment-token>` 7. Install successfully elasticsearch.
>
> 
>

Default account:elastic Password: tRZfgFvq+6bzGBh+aqAE Updated: password: elastic123

2. Install Kibana.

Back to the elasticsearch node and generate token using:

```
/usr/share/elasticsearch/bin/elasticsearch-create-enrollment-token -s kibana
```

> The result is:
>
> ```
> Unable to create enrollment token for scope [kibana]
>
> ERROR: Read timed out, with exit code 73
> root@duyanhserver:/home/satan# /usr/share/elasticsearch/bin/elasticsearch-create-enrollment-token -s kibana
> warning: ignoring JAVA_HOME=/usr/lib/jvm/java-21-openjdk-amd64; using bundled JDK
> eyJ2ZXIiOiI4LjE0LjAiLCJhZHIiOlsiMTAwLjg3LjI0My41OTo5MjAwIl0sImZnciI6ImJhYWYyYjgxYTMxNTU2NDQ0YWQxNzFmODZjYjRmOWRlMGY3NjM2
> NWVhZjQ3NGJkN2E5Nzk3MDdkMzM5NjBkM2IiLCJrZXkiOiIydVJxT0pNQkotTWR1eU5FMGxvdjpPU2F1N3FXdFRCZVU1NXktYzA5S0JnIn0=
> root@duyanhserver:/home/satan#
> ```

1. Install kibana as guided through google (Just search installing Kibana)
2.

```
sudo systemctl daemon-reload
sudo systemctl enable kibana.service
```

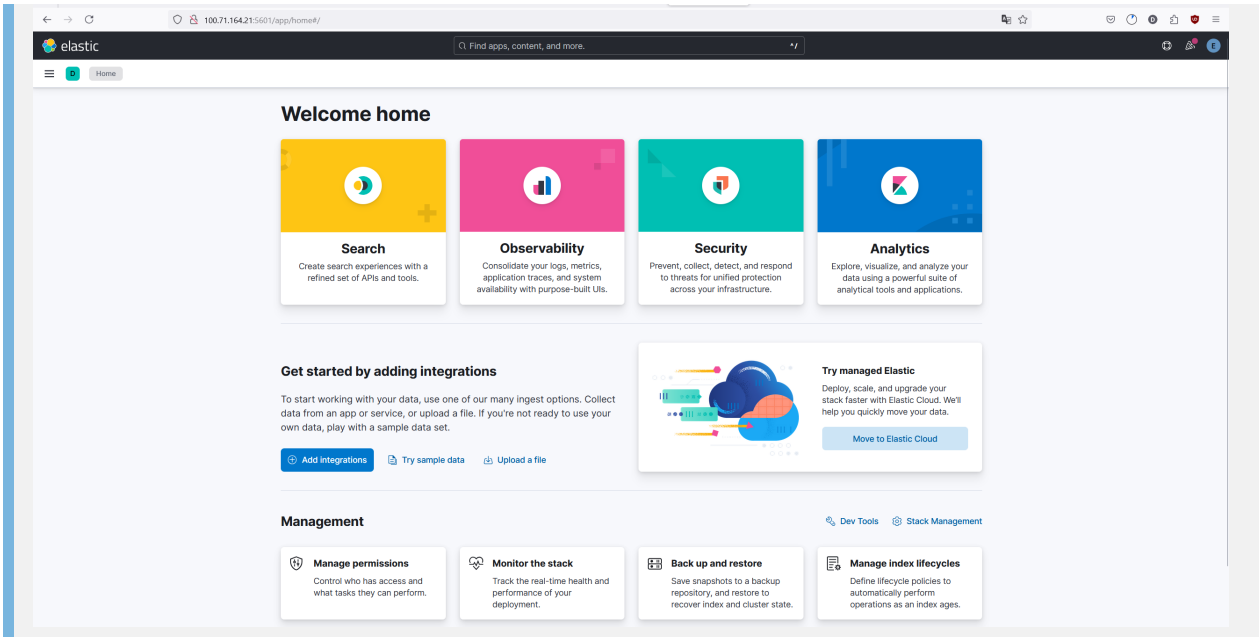
3. Edit `etc/kibana/kibana.yml'
4. Back to elastic server to generate kibana enrollment token.
5. Enable elasticsearch to run as a service.

```
sudo systemctl daemon-reload
sudo systemctl enable kibana.service
```

6. Edit file `/etc/kibana/kibana.yml` Keys to edit:

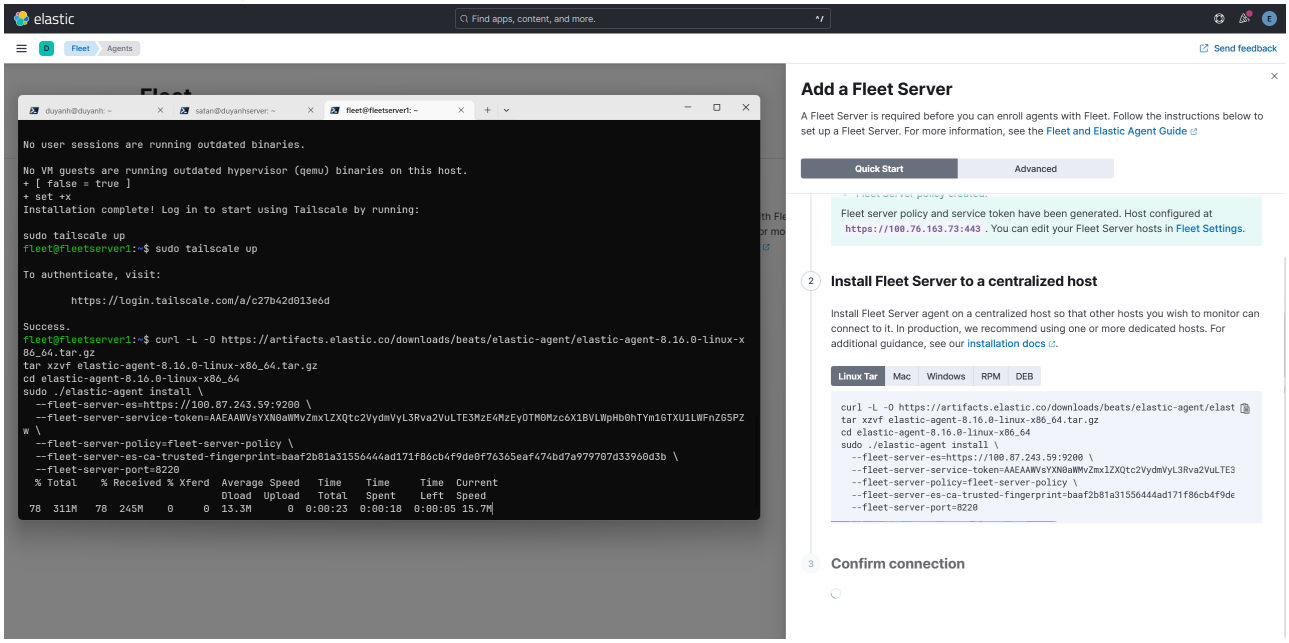
```
server.host: the current ip address of the server
```

7. Start kibana `sudo systemctl start kibana.service`
8. http://ip_address:5601/code= `(Node that this code get by run systemctl status)`
   `http://100.71.164.21:5601`
9. `Result:`

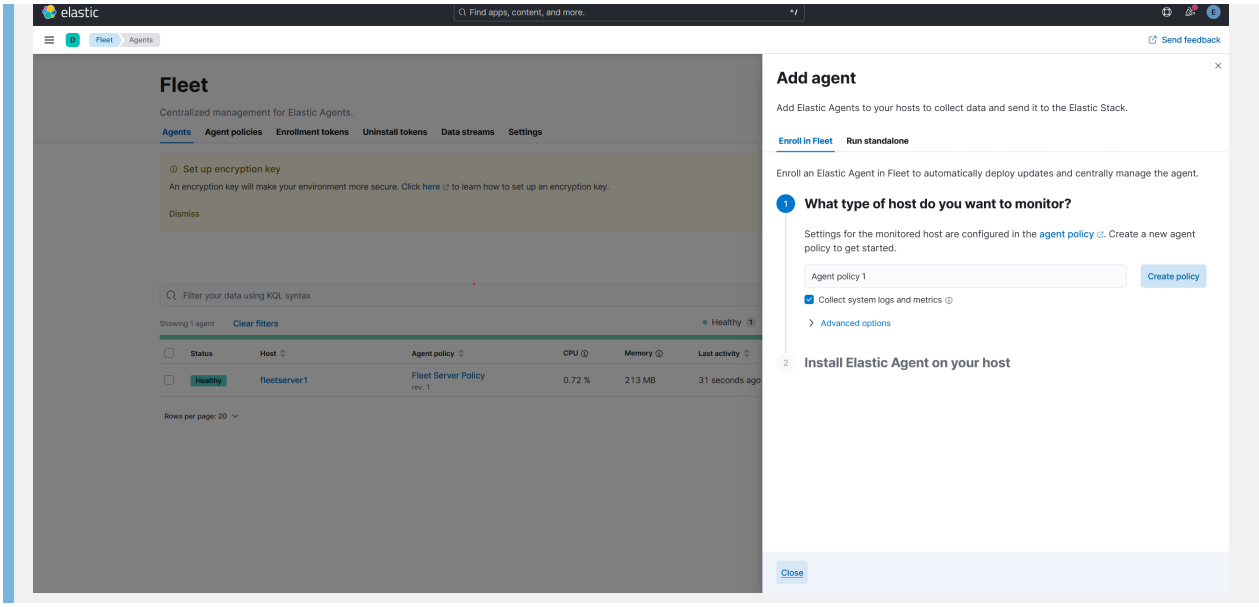


3. Install Fleet Server

1. Navigate to fleet in kibana dashboard.
2. Do the step as guided in the dashboard.

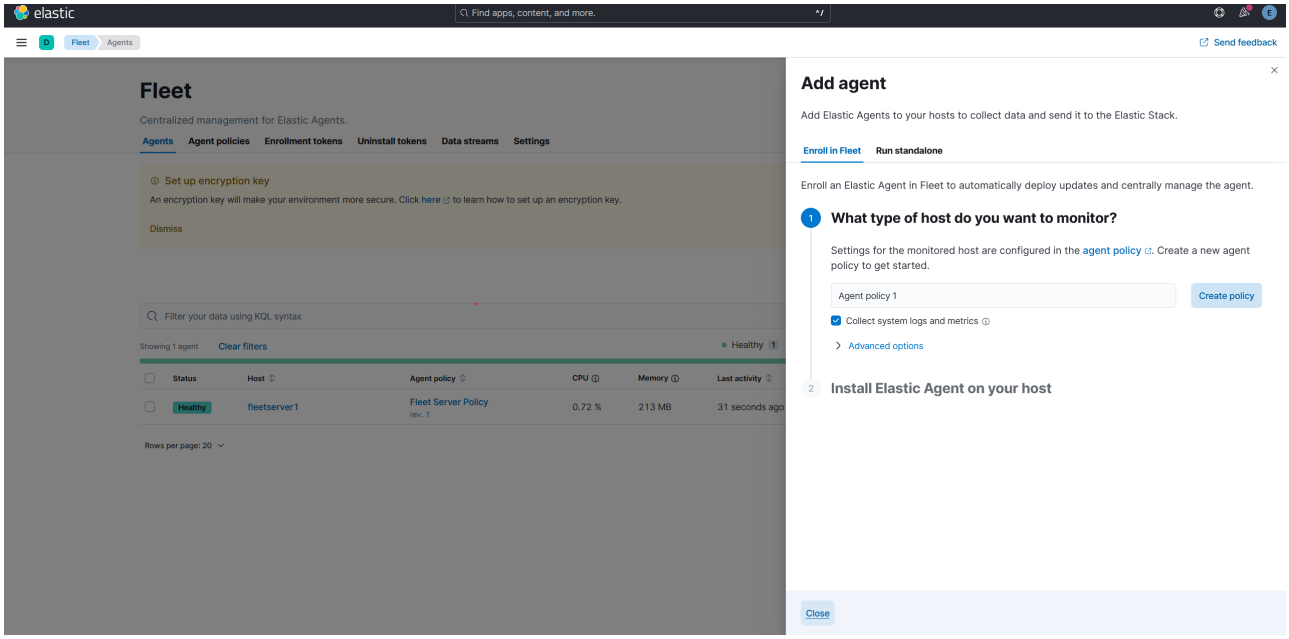


3. Result

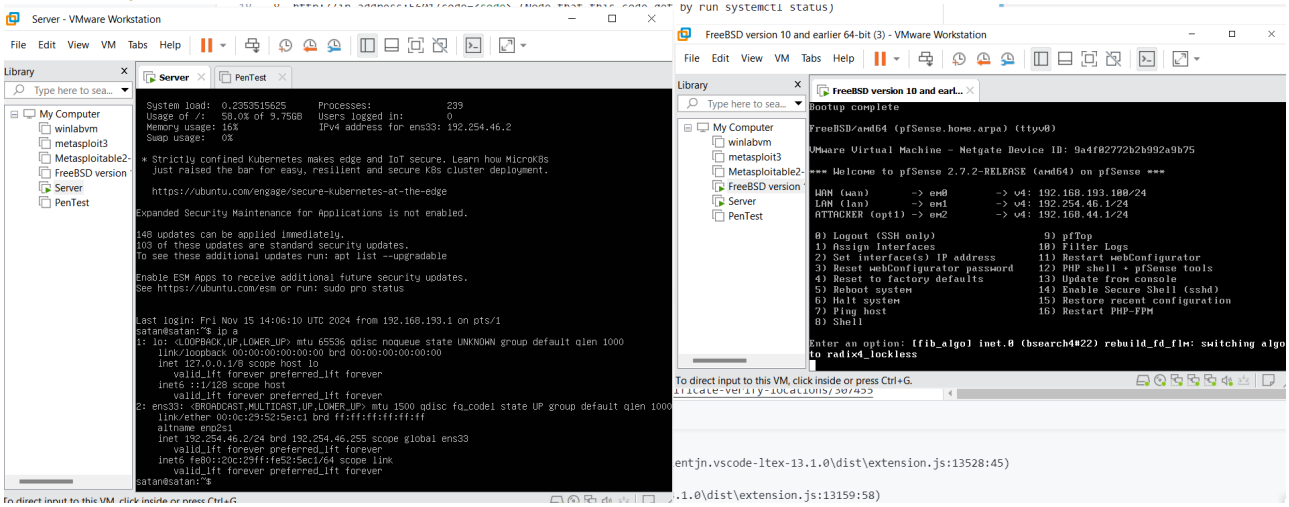


4. Add agent.

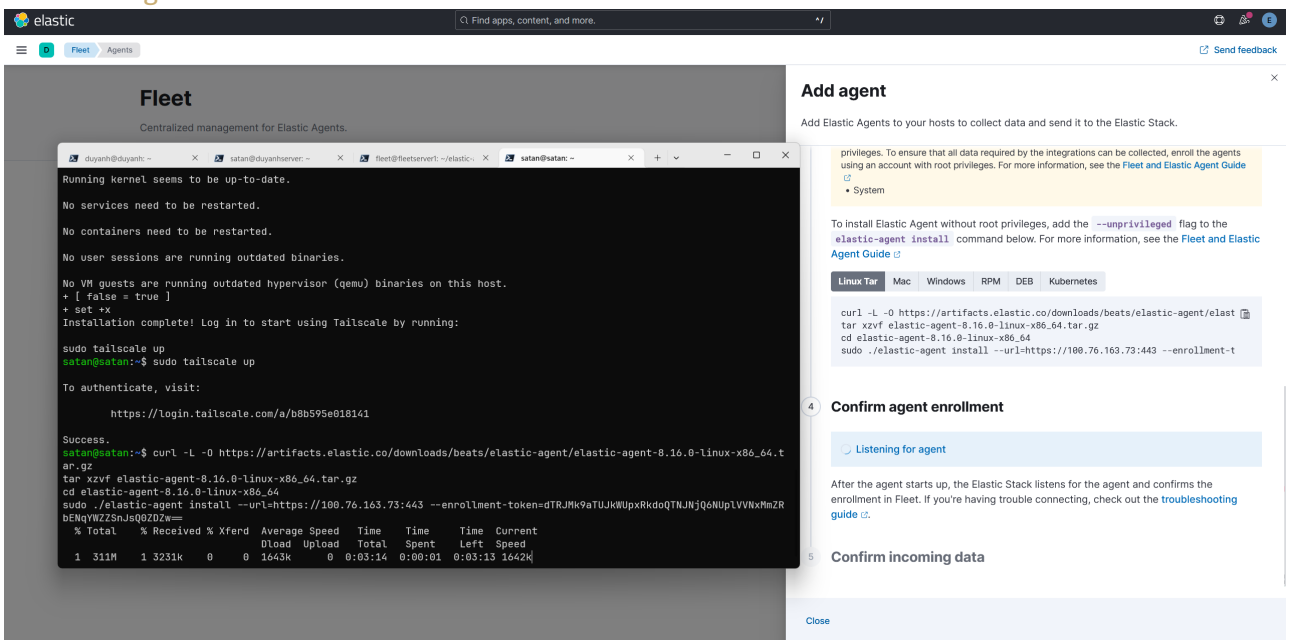
1. Install agent.



2. Turn on pfsense firewall and the server behind it.

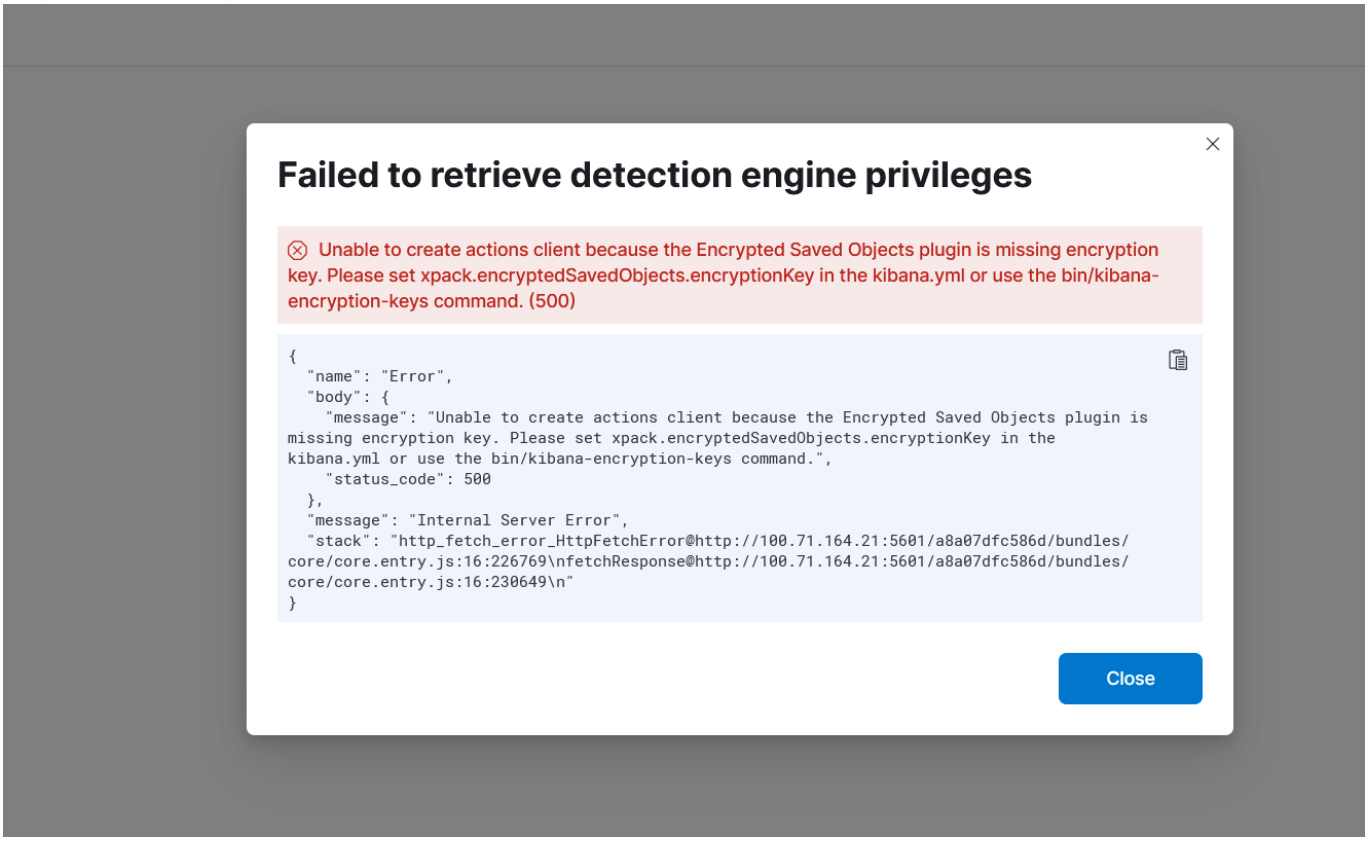


3. Install agent.



5. Add rule.

Engine priviliged error.



Link to fix: https://www.elastic.co/guide/en/security/current/detections-permissions-section.html .

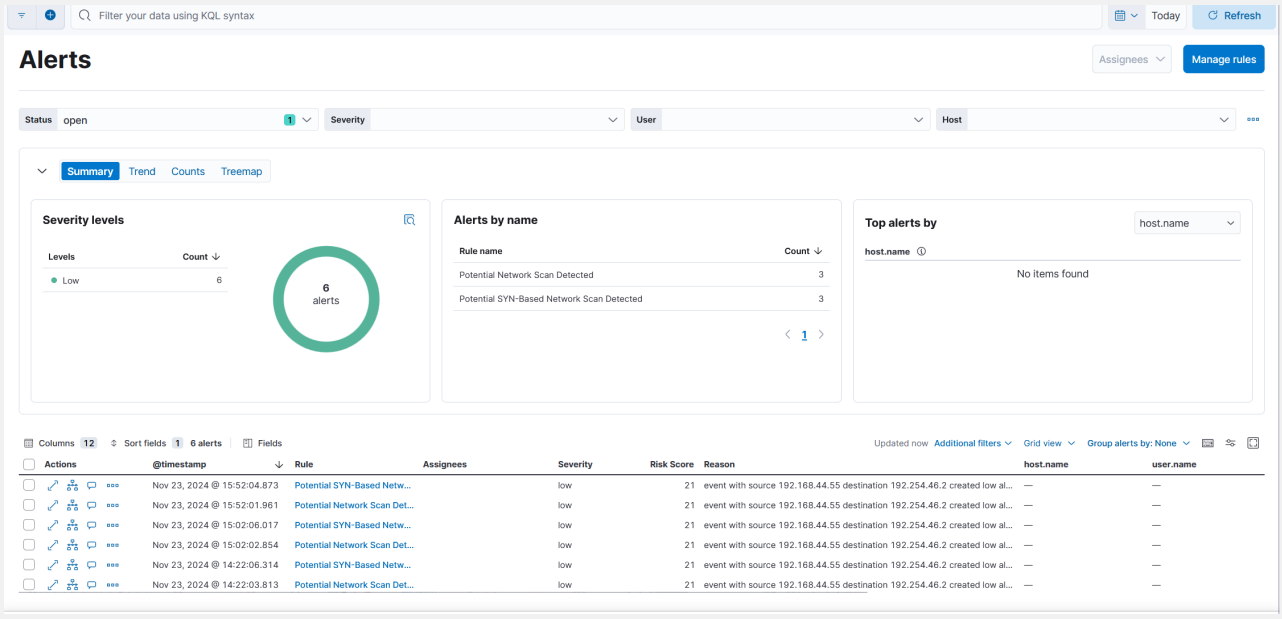
Install and enable two rule "Potential SYN-Based Network Scan detected" and "Potential Network Scan detected"

Demo by pingint from kali linux vm to an ubuntu server:

```
┌──(satan㉿kali)-[~]
└─$ sudo nmap 192.254.46.2
[sudo] password for satan:
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-11-23 00:47 PST
Nmap scan report for 192.254.46.2
Host is up (0.00087s latency).
Not shown: 999 closed tcp ports (reset)
PORT   STATE SERVICE
22/tcp open  ssh

Nmap done: 1 IP address (1 host up) scanned in 0.25 seconds
```

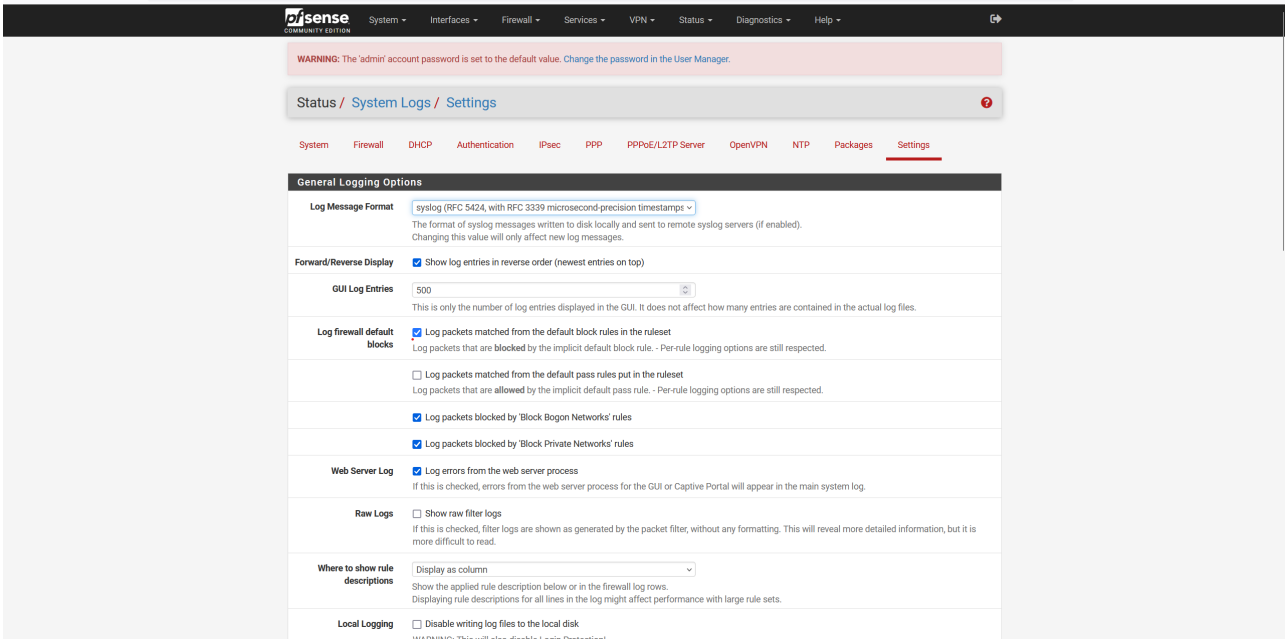
Result:



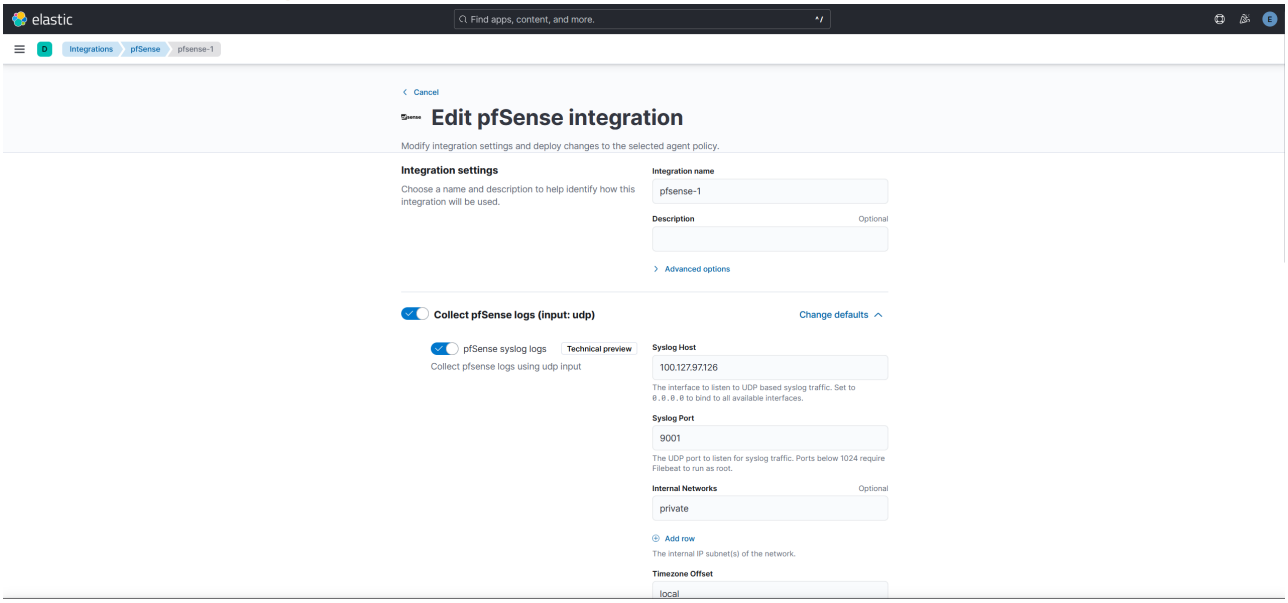
Setup pfsense

1. Install iso disk from the netgate page.
2. Then cofigure vmnet host-only in vmare.
3. The wan interface will receive internet through the real machine. Unable dhcp in all interfaces, we can enable them later.
4. There will be 2 LAN network.
5. From pfsense, send logs to elk.

6. Navigate to Status/System Logs/ Settings.



- Change Log message format to syslog.
- Enable send log to remote syslog server
- Enter ip address of remote syslog host and port, here choose another elastic agent as remote syslog server and ports for sending logs are: 443,9001, 5601 and then select send everything.
- Edit pfsense intergration.



Some good reference.

1. https://discuss.elastic.co/t/new-install-error-setting-certificate-verify-locations/307455
2. https://www.elastic.co/guide/en/elastic-stack/8.13/installing-stack-demo-self.html#install-stack-self-elasticsearch-first
3. PFSENSE - ELASTIC: https://www.elastic.co/docs/current/integrations/pfsense
4.