

# ELK INSTALLATION IN DEBIAN

## Step 1: Install Dependencies & Import GPG Key

First, update your package lists and install the necessary tools to handle HTTPS repositories.

```
sudo apt update  
sudo apt install -y apt-transport-https software-properties-common wget curl gnupg
```

Next, import the official Elastic public signing key. This ensures the packages you download are genuine.

```
wget -qO - https://artifacts.elastic.co/GPG-KEY-elasticsearch | sudo gpg --dearmor -o /usr/share/keyrings/elasticsearch-keyring.gpg
```

## Step 2: Add the Elastic Repository

Add the Elastic 8.x repository to your system's source list.

```
echo "deb [signed-by=/usr/share/keyrings/elasticsearch-keyring.gpg] https://artifacts.elastic.co/packages/8.x/apt stable main" | sudo tee  
/etc/apt/sources.list.d/elastic-8.x.list
```

Update your repository index to recognize the new packages:

```
sudo apt update
```

```
root@vbox:/home/elk# wget -qO - https://artifacts.elastic.co/GPG-KEY-elasticsearch | sudo gpg --dearmor -o /usr/share/keyrings/elasticsearch-keyring.gpg  
root@vbox:/home/elk# echo "deb [signed-by=/usr/share/keyrings/elasticsearch-keyring.gpg] https://artifacts.elastic.co/packages/8.x/apt stable main" | sudo t  
ee /etc/apt/sources.list.d/elastic-8.x.list  
deb [signed-by=/usr/share/keyrings/elasticsearch-keyring.gpg] https://artifacts.elastic.co/packages/8.x/apt stable main  
root@vbox:/home/elk# sudo apt update  
Hit:1 http://deb.debian.org/debian trixie InRelease  
Hit:2 http://security.debian.org/debian-security trixie-security InRelease  
Hit:3 http://deb.debian.org/debian trixie-updates InRelease  
Get:4 https://artifacts.elastic.co/packages/8.x/apt stable InRelease [3,248 B]  
Get:5 https://artifacts.elastic.co/packages/8.x/apt stable/main amd64 Packages [98.7 kB]  
Fetched 102 kB in 0s (289 kB/s)  
All packages are up to date.  
root@vbox:/home/elk# |
```

## Step 3: Install Elasticsearch 8.13.1

To install the specific version **8.13.1**, we use the = operator

```
sudo apt install elasticsearch=8.13.1
```

```
root@vbox:/home/elk# sudo apt install elasticsearch=8.13.1
Installing:
  elasticsearch

Summary:
  Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 0
  Download size: 574 MB
  Space needed: 1,133 MB / 111 GB available

Get:1 https://artifacts.elastic.co/packages/8.x/apt stable/main amd64 elasticsearch amd64 8.13.1 [574 MB]
1% [1 elasticsearch 7,968 kB/574 MB 1%]
```

Step 4: Enable and Start Elasticsearch

```
sudo systemctl daemon-reload
sudo systemctl enable --now elasticsearch
```

```
root@vbox:/home/elk# nano token.txt
root@vbox:/home/elk# sudo systemctl daemon-reload
root@vbox:/home/elk# systemctl enable elasticsearch
Created symlink '/etc/systemd/system/multi-user.target.wants/elasticsearch.service' → '/usr/lib/systemd/system/elasticsearch.service'.
root@vbox:/home/elk# |
```

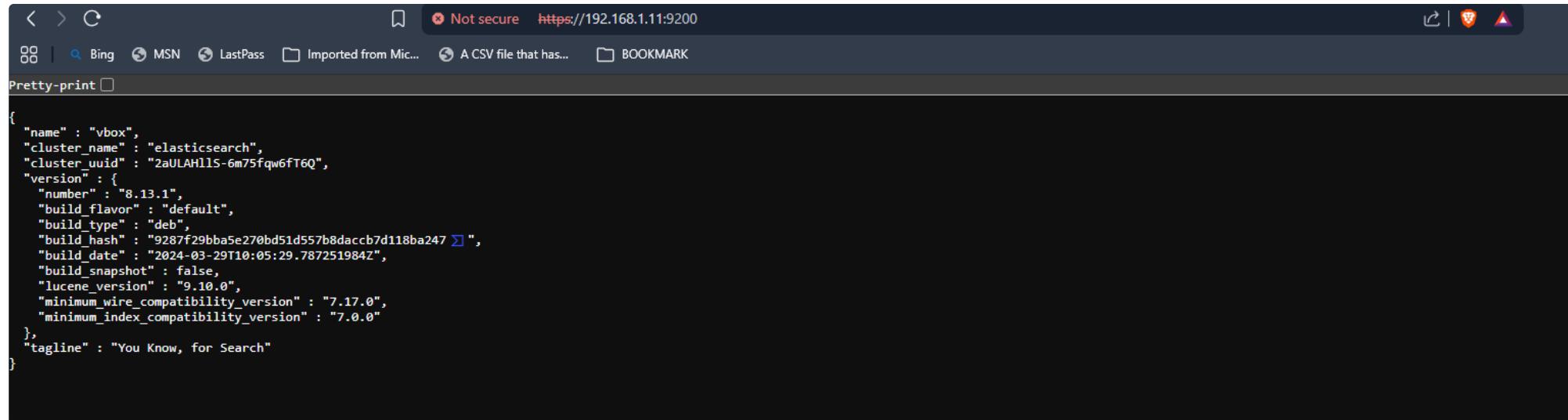
Step 5 : open a elasticsearch yml file and uncomment the line

```
nano /etc/elasticsearch/elasticsearch.yml
```

```
GNU nano 8.4
#
# Use a descriptive name for your cluster:
#
cluster.name: my-application
#
# ----- Node -----
#
# Use a descriptive name for the node:
#
#node.name: node-1
#
# Add custom attributes to the node:
#
#node.attr.rack: r1
#
# ----- Paths -----
#
# Path to directory where to store the data (separate multiple locations by comma):
#
path.data: /var/lib/elasticsearch
#
# Path to log files:
#
path.logs: /var/log/elasticsearch
#
# ----- Memory -----
#
# Lock the memory on startup:
#
#bootstrap.memory_lock: true
#
# Make sure that the heap size is set to about half the memory available
# on the system and that the owner of the process is allowed to use this
# limit.
#
# Elasticsearch performs poorly when the system is swapping the memory.
#
# ----- Network -----
#
# By default Elasticsearch is only accessible on localhost. Set a different
# address here to expose this node on the network:
#
network.host: 0.0.0.0
#
# By default Elasticsearch listens for HTTP traffic on the first free port it
# finds starting at 9200. Set a specific HTTP port here:
```

```
#  
http.port: 9200  
#  
# For more information, consult the network module documentation.  
  
systemctl start elasticsearch
```

after change the config file start elasticsearch services



The screenshot shows a browser window with the URL [https://192.168.1.11:9200/\\_source](https://192.168.1.11:9200/_source). The page content is a JSON object representing the Elasticsearch version:

```
{  
  "name" : "vbox",  
  "cluster_name" : "elasticsearch",  
  "cluster_uuid" : "2aULAHlls-6m75fqw6fT6Q",  
  "version" : {  
    "number" : "8.13.1",  
    "build_flavor" : "default",  
    "build_type" : "deb",  
    "build_hash" : "9287f29bba5e270bd51d557b8daccb7d118ba247",  
    "build_date" : "2024-03-29T10:05:29.787251984Z",  
    "build_snapshot" : false,  
    "lucene_version" : "9.10.0",  
    "minimum_wire_compatibility_version" : "7.17.0",  
    "minimum_index_compatibility_version" : "7.0.0"  
  },  
  "tagline" : "You Know, for Search"  
}
```

## install kibana

```
sudo apt install kibana=8.13.1
```

```
root@vbox:/home/elk# sudo apt install kibana=8.13.1
Installing:
  kibana

Summary:
  Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 1
  Download size: 321 MB
  Space needed: 938 MB / 109 GB available

Get:1 https://artifacts.elastic.co/packages/8.x/apt/stable/main amd64 kibana amd64 8.13.1 [321 MB]
1% [1 kibana 3,827 kB/321 MB 1%]
```

## Configure Kibana

Enable and start the service:

```
sudo systemctl enable --now kibana
```

**Access the Setup:** Open your web browser and go to <http://:5601>

```
# For more configuration options see the configuration guide for Kibana in
# https://www.elastic.co/guide/index.html

# ===== System: Kibana Server =====
# Kibana is served by a back end server. This setting specifies the port to use.
server.port: 5601

# Specifies the address to which the Kibana server will bind. IP addresses and host names are both valid values.
# The default is 'localhost', which usually means remote machines will not be able to connect.
# To allow connections from remote users, set this parameter to a non-loopback address.
server.host: "192.168.1.11"

# Enables you to specify a path to mount Kibana at if you are running behind a proxy.
# Use the 'server.rewriteBasePath' setting to tell Kibana if it should remove the basePath
# from requests it receives, and to prevent a deprecation warning at startup.
# This setting cannot end in a slash.
#serverbasePath: ""

# Specifies whether Kibana should rewrite requests that are prefixed with
# 'server.basePath' or require that they are rewritten by your reverse proxy.
# Defaults to 'false'.
#server.rewriteBasePath: false

# Specifies the public URL at which Kibana is available for end users. If
# 'server.basePath' is configured this URL should end with the same basePath.
server.publicBaseUrl: "http://192.168.1.11:5601"

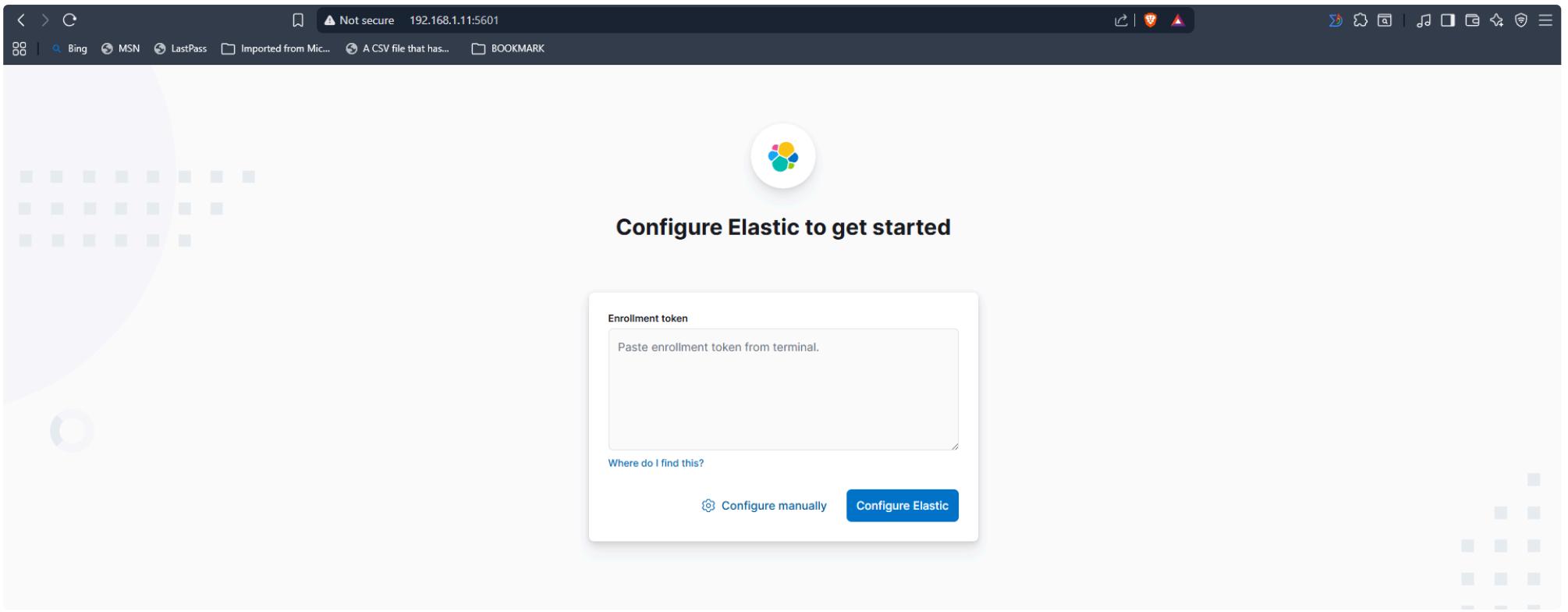
# The maximum payload size in bytes for incoming server requests.
#server.maxPayload: 1048576

# The Kibana server's name. This is used for display purposes.
#server.name: "your-hostname"
```

open config file of kibana

```
nano /etc/kibana/kibana.yml
```

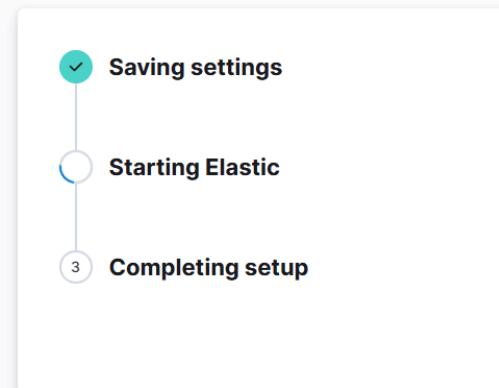
changes uper screenshot in config file



Generate an enrollment token for Kibana instances with  
`/usr/share/elasticsearch/bin/elasticsearch-create-enrollment-token -s kibana`



## Configure Elastic to get started



```
New value: PaJYtMlNFFTbnggMuQCC
root@vbox:/usr/share/elasticsearch# nano pass.txt
root@vbox:/usr/share/elasticsearch# nano pass.txt
root@vbox:/usr/share/elasticsearch# sudo /usr/share/kibana/bin/kibana-verification-code
Your verification code is: 682 796
root@vbox:/usr/share/elasticsearch# |
```

```
sudo /usr/share/kibana/bin/kibana-verification-code
```

Not secure 192.168.1.11:5601/app/home#/

Bing MSN LastPass Imported from Mic... A CSV file that has... BOOKMARK

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[Dev Tools](#) [Stack Management](#)

install logstash

```
root@vbox:~# sudo apt install logstash=1:8.13.1-1
Installing:
  logstash

Summary:
  Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 2
  Download size: 404 MB
  Space needed: 668 MB / 107 GB available

Get:1 https://artifacts.elastic.co/packages/8.x/apt stable/main amd64 logstash amd64 1:8.13.1-1 [404 MB]
Fetched 404 MB in 44s (9,230 kB/s)
Selecting previously unselected package logstash.
(Reading database ... 226941 files and directories currently installed.)
Preparing to unpack .../logstash_1%3a8.13.1-1_amd64.deb ...
Unpacking logstash (1:8.13.1-1) ...
Setting up logstash (1:8.13.1-1) ...
root@vbox:~# sudo systemctl enable --now logstash
Created symlink '/etc/systemd/system/multi-user.target.wants/logstash.service' → '/usr/lib/systemd/system/logstash.service'.
root@vbox:~# sudo systemctl start logstash
root@vbox:~# |
```

Install Logstash with the matching version.

```
sudo apt install logstash=8.13.1
```

nable and start Logstash:

```
sudo systemctl enable --now logstash
```

```
sudo systemctl start logstash
```