Configure Elasticsearch/Kibana for TLS and Authentication

- Shutdown elk-cluster
- 2. Add certificate path to elasticsearch config in docker-compose.yml

```
volumes:
- ./certs:/certs
```

- 3. Start elasticsearch
 - \$ docker-compose up -d elasticsearch
- 4. Create certificates

```
$ docker exec -it elk-test-elasticsearch bash
[root@elk-test-elasticsearch elasticsearch]# bin/elasticsearch-certutil
ca -pem -ca-dn "cn=Elastic Stack CA"
This tool assists you in the generation of X.509 certificates and
certificate
signing requests for use with SSL/TLS in the Elastic stack.
[ ... ]
If you elect to generate PEM format certificates (the -pem option),
then the output will
be a zip file containing individual files for the CA certificate and
private key
Please enter the desired output file [elastic-stack-ca.zip]:
[root@elk-test-elasticsearch elasticsearch]# unzip -d /certs/ elastic-
stack-ca.zip
[root@elk-test-elasticsearch elasticsearch]# bin/elasticsearch-certutil
http
## Elasticsearch HTTP Certificate Utility
[ ... ]
## Do you wish to generate a Certificate Signing Request (CSR)?
[ ... ]
Generate a CSR? [y/N]n
## Do you have an existing Certificate Authority (CA) key-pair that you
wish to use to sign your certificate?
```

```
[ \dots ]
Use an existing CA? [y/N]y
## What is the path to your CA?
CA Path: /certs/ca/ca.crt
## What is the path to your CA key?
/certs/ca/ca.crt appears to be a PEM formatted certificate file.
In order to use it for signing we also need access to the private key
that corresponds to that certificate.
CA Key: /certs/ca/ca.key
For how long should your certificate be valid? [5y]
[ ... ]
Generate a certificate per node? [y/N]y
## What is the name of node #1?
This name will be used as part of the certificate file name, and as a
descriptive name within the certificate.
You can use any descriptive name that you like, but we recommend using
the name
of the Elasticsearch node.
node #1 name: elk-test-elasticsearch
## Which hostnames will be used to connect to elk-test-elasticsearch?
[ ... ]
Enter all the hostnames that you need, one per line.
When you are done, press <ENTER> once more to move on to the next step.
elk-test-elasticsearch
You entered the following hostnames.
 - elk-test-elasticsearch
Is this correct [Y/n]y
## Which IP addresses will be used to connect to elk-test-
elasticsearch?
```

http://fortytwo.adurias.org/ Printed on 2025/11/04 07:47

Enter all the IP addresses that you need, one per line. When you are done, press <ENTER> once more to move on to the next step.

[...]

You did not enter any IP addresses.

Is this correct [Y/n]y

Other certificate options

The generated certificate will have the following additional configuration

values. These values have been selected based on a combination of the information you have provided above and secure defaults. You should not need to

change these values unless you have specific requirements.

Key Name: elk-test-elasticsearch

Subject DN: CN=elk-test-elasticsearch

Key Size: 2048

Do you wish to change any of these options? [y/N]n Generate additional certificates? [Y/n]n

What password do you want for your private key(s)?

Your private key(s) will be stored in a PKCS#12 keystore file named "http.p12".

This type of keystore is always password protected, but it is possible to use a

blank password.

If you wish to use a blank password, simply press <enter> at the prompt below.

Provide a password for the "http.p12" file: [<ENTER> for none]

Where should we save the generated files?

A number of files will be generated including your private key(s), public certificate(s), and sample configuration options for Elastic Stack products.

These files will be included in a single zip archive.

What filename should be used for the output zip file? [/usr/share/elasticsearch/elasticsearch-ssl-http.zip]

Zip file written to /usr/share/elasticsearch/elasticsearch-ssl-http.zip

[root@elk-test-elasticsearch elasticsearch]# unzip -d /certs/

```
elasticsearch-ssl-http.zip
Archive: elasticsearch-ssl-http.zip
    creating: /certs/elasticsearch/
inflating: /certs/elasticsearch/README.txt
inflating: /certs/elasticsearch/http.p12
inflating: /certs/elasticsearch/sample-elasticsearch.yml
    creating: /certs/kibana/
inflating: /certs/kibana/README.txt
inflating: /certs/kibana/elasticsearch-ca.pem
inflating: /certs/kibana/sample-kibana.yml
```

- 5. Configure elasticsearch for TLS & X-Pack Security
 - 1. Shutdown elasticsearch

```
$ docker-compose down
Stopping elk-test-elasticsearch ... done
Removing elk-test-elasticsearch ... done
Removing network elk-test_default
```

2. Add certificate mount to docker-compose

```
volumes:
    -
./elasticsearch/config/elasticsearch.pl2:/usr/share/elasticsearch/
config/elasticsearch.pl2:ro
```

3. Copy P12 file to correct place

```
cp certs/elasticsearch/http.p12
elasticsearch/config/elasticsearch.p12
   - Update elasticsearch.yml<code>
# grep xpack elasticsearch/config/elasticsearch.yml
xpack.security.enabled: true
xpack.security.http.ssl.enabled: true
xpack.security.http.ssl.verification_mode: "certificate"
xpack.security.http.ssl.keystore.path: "elasticsearch.p12"
```

kb, elasticsearch

From:

http://fortytwo.adurias.org/ - Fortytwo - Answer to the Ultimate Question of Life, the Universe, and Everything

Permanent link:

http://fortytwo.adurias.org/elasticsearch-tls?rev=1604747005

Last update: 2020/11/07 12:03

