EJERCICIO 1


```
ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/cluster-hadoop-practica-m?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=true - Google Chrome

ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/cluster-hadoop-practica-m?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=true

SSH-in-browser                                                    UPLOAD FILE    DOWNLOAD FILE

Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1067-gcp x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Sat Oct 26 18:45:04 UTC 2024

  System load:  0.36               Processes:             157
  Usage of /:   31.9% of 48.27GB   Users logged in:       1
  Memory usage: 41%                IPv4 address for ens4: 10.128.0.7
  Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

8 updates can be applied immediately.
7 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

7 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

New release '22.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Sat Oct 26 18:43:46 2024 from 35.235.245.128
rubengc2@cluster-hadoop-practica-m:~$ gsutil cp gs://bucket-elastic-practica/jars/elastic/commons-httpclient-3.1.jar .
Copying gs://bucket-elastic-practica/jars/elastic/commons-httpclient-3.1.jar...
/ [1 files][297.8 KiB/297.8 KiB]
Operation completed over 1 objects/297.8 KiB.
rubengc2@cluster-hadoop-practica-m:~$ gsutil cp gs://bucket-elastic-practica/jars/elastic/elasticsearch-hadoop-8.14.1.jar .
Copying gs://bucket-elastic-practica/jars/elastic/elasticsearch-hadoop-8.14.1.jar...
/ [1 files][  2.1 MiB/  2.1 MiB]
Operation completed over 1 objects/2.1 MiB.
rubengc2@cluster-hadoop-practica-m:~$
```
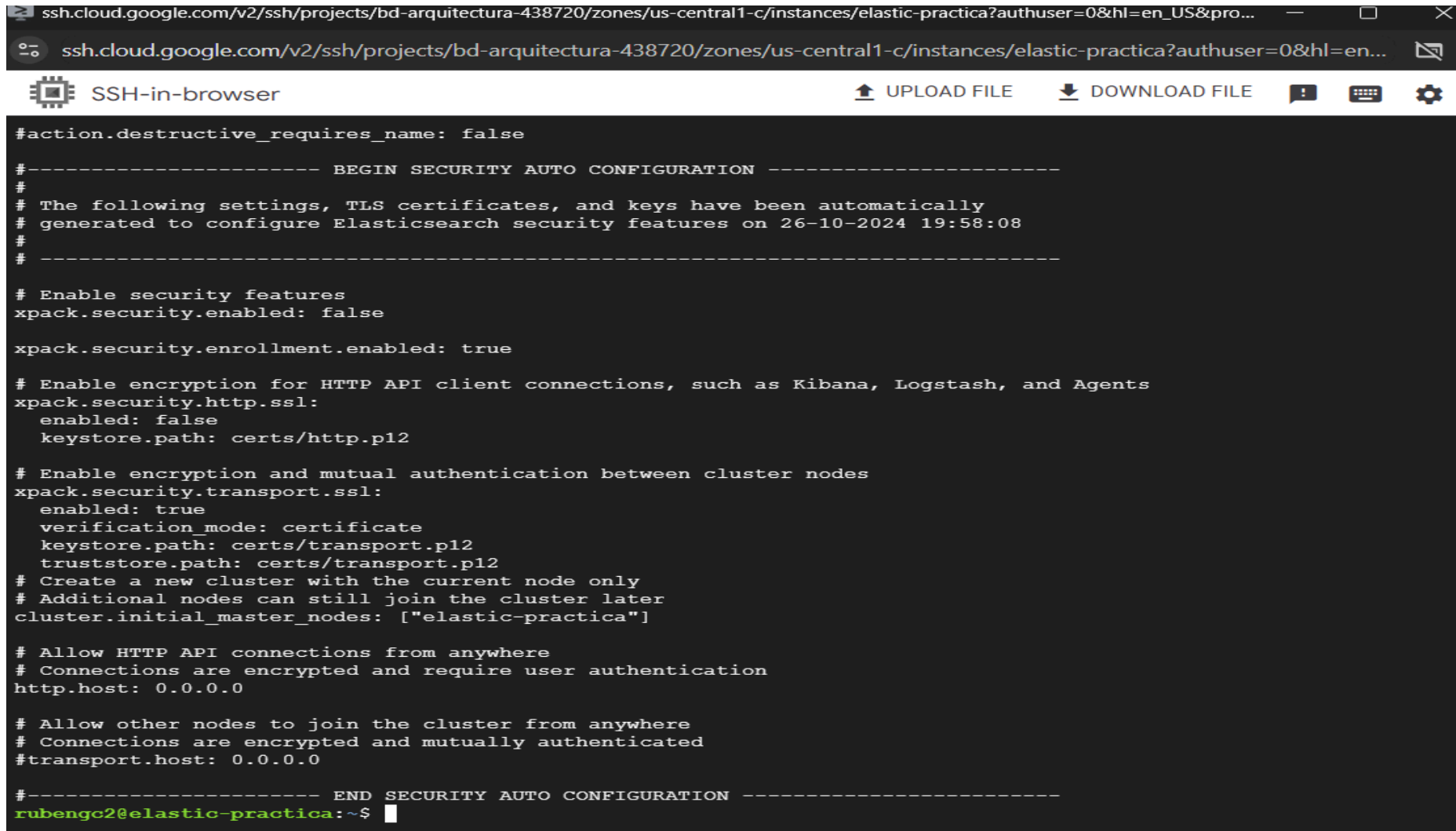
EJERCICIO 2


```
#action.destructive_requires_name: false

#-------------------- BEGIN SECURITY AUTO CONFIGURATION -----------------------
#
# The following settings, TLS certificates, and keys have been automatically
# generated to configure Elasticsearch security features on 26-10-2024 19:58:08
#
# ------------------------------------------------------------------------------

# Enable security features
xpack.security.enabled: false

xpack.security.enrollment.enabled: true

# Enable encryption for HTTP API client connections, such as Kibana, Logstash, and Agents
xpack.security.http.ssl:
  enabled: false
  keystore.path: certs/http.p12

# Enable encryption and mutual authentication between cluster nodes
xpack.security.transport.ssl:
  enabled: true
  verification_mode: certificate
  keystore.path: certs/transport.p12
  truststore.path: certs/transport.p12
# Create a new cluster with the current node only
# Additional nodes can still join the cluster later
cluster.initial_master_nodes: ["elastic-practica"]

# Allow HTTP API connections from anywhere
# Connections are encrypted and require user authentication
http.host: 0.0.0.0

# Allow other nodes to join the cluster from anywhere
# Connections are encrypted and mutually authenticated
#transport.host: 0.0.0.0

#-------------------- END SECURITY AUTO CONFIGURATION -----------------------
rubengc2@elastic-practica:~$
```

ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/cluster-hadoop-practica-m?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=true

SSH-in-browser

⬆ UPLOAD FILE   ⬇ DOWNLOAD FILE

```
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Copying gs://bucket-elastic-practica/jars/elastic/elasticsearch-hadoop-8.14.1.jar...
/ [1 files][  2.1 MiB/  2.1 MiB]
Operation completed over 1 objects/2.1 MiB.
rubengc2@cluster-hadoop-practica-m:~$ curl -I http://34.132.85.46:9200
HTTP/1.1 200 OK
X-elastic-product: Elasticsearch
content-type: application/json
content-length: 541

rubengc2@cluster-hadoop-practica-m:~$ 
```

EJERCICIO 3

```
Last login: Sat Oct 26 18:43:46 2024 from 35.235.245.128
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Copying gs://bucket-elastic-practica/jars/elastic/commons-httpclient-3.1.jar...
/ [1 files][297.8 KiB/297.8 KiB]
Operation completed over 1 objects/297.8 KiB.
rubengc2@cluster-hadoop-practica-m:~$ gsutil cp gs://bucket-elastic-practica/jars/elastic/elasticsearch-hadoop-8.14.1.jar .
Copying gs://bucket-elastic-practica/jars/elastic/elasticsearch-hadoop-8.14.1.jar...
/ [1 files][  2.1 MiB/  2.1 MiB]
Operation completed over 1 objects/2.1 MiB.
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HTTP/1.1 200 OK
X-elastic-product: Elasticsearch
content-type: application/json
content-length: 541

rubengc2@cluster-hadoop-practica-m:~$ sudo sed -i '$d' /etc/hive/conf.dist/hive-site.xml
rubengc2@cluster-hadoop-practica-m:~$ sudo sed -i '$a \  <property>\n    <name>es.nodes</name>\n    <value>34.132.85.46</value>\n  </property>\n' /etc/hive/conf.dist/hive-site.xml
rubengc2@cluster-hadoop-practica-m:~$ sudo sed -i '$a \  <property>\n    <name>es.port</name>\n    <value>9200</value>\n  </property>\n' /etc/hive/conf.dist/hive-site.xml
rubengc2@cluster-hadoop-practica-m:~$ sudo sed -i '$a \  <property>\n    <name>es.nodes.wan.only</name>\n    <value>true</value>\n  </property>\n' /etc/hive/conf.dist/hive-site.xml
rubengc2@cluster-hadoop-practica-m:~$ sudo sed -i '$a \  <property>\n    <name>hive.aux.jars.path</name>\n    <value>/usr/lib/hive/lib/elasticsearch-hadoop-8.14.1.jar,/usr/lib/hive/lib/commons-httpclient-3.1.jar</value>\n  </property>\n</configuration>' /etc/hive/conf.dist/hive-site.xml
rubengc2@cluster-hadoop-practica-m:~$ sudo cp elasticsearch-hadoop-8.14.1.jar /usr/lib/hive/lib/
rubengc2@cluster-hadoop-practica-m:~$ sudo cp commons-httpclient-3.1.jar /usr/lib/hive/lib/
rubengc2@cluster-hadoop-practica-m:~$ sudo service hive-server2 restart
rubengc2@cluster-hadoop-practica-m:~$ curl -X GET "http://<IP_ELASTIC>:9200/"
curl: (3) URL using bad/illegal format or missing URL
rubengc2@cluster-hadoop-practica-m:~$ curl -X GET "http://34.132.85.46:9200/"
{
  "name" : "elastic-practica",
  "cluster_name" : "elasticsearch",
  "cluster_uuid" : "Zq_mGtG_RrCLnpy8-JBkBQ",
  "version" : {
    "number" : "8.14.1",
    "build_flavor" : "default",
    "build_type" : "deb",
    "build_hash" : "93a57a1a76f556d8aee6a90d1a95b06187501310",
    "build_date" : "2024-06-10T23:35:17.114581191Z",
    "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"
}
rubengc2@cluster-hadoop-practica-m:~$
```

EJERCICIO 4

ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/elastic-practica?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=true - Google Chrome

ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/elastic-practica?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=t

SSH-in-browser

```
rubengc2@elastic-practica:~$ curl -X GET "http://34.132.85.46:9200/alumnos/_search?pretty"
{
  "took" : 3,
  "timed_out" : false,
  "_shards" : {
    "total" : 1,
    "successful" : 1,
    "skipped" : 0,
    "failed" : 0
  },
  "hits" : {
    "total" : {
      "value" : 6,
      "relation" : "eq"
    },
    "max_score" : 1.0,
    "hits" : [
      {
        "_index" : "alumnos",
        "_id" : "6",
        "_score" : 1.0,
        "_source" : {
          "title" : "New Document",
          "content" : "This is a new document for the master class",
          "tag" : [
            "general",
            "testing"
          ]
        }
      },
      {
        "_index" : "alumnos",
        "_id" : "3",
        "_score" : 1.0,
        "_source" : {
          "id" : 3,
          "name" : "Carlos",
          "last_name" : "González"
        }
      },
      {
        "_index" : "alumnos",
        "_id" : "4",
        "_score" : 1.0,
        "_source" : {
          "id" : 4,
          "name" : "María",
          "last_name" : "López"
        }
      },
      {
        "_index" : "alumnos",
        "_id" : "5",
        "_score" : 1.0,
        "_source" : {
          "id" : 5,
          "name" : "Luis",
          "last_name" : "Martínez"
        }
      },
      {
        "_index" : "alumnos",
        "_id" : "7",
        "_score" : 1.0,
        "_source" : {
          "id" : 7,
          "name" : "Sofía",
          "last_name" : "Ramírez"
        }
      },
      {
        "_index" : "alumnos",
        "_id" : "8",
        "_score" : 1.0,
        "_source" : {
          "id" : 8,
```

ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/elastic-practica?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=true - Google Chrome

ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura-438720/zones/us-central1-c/instances/elastic-practica?authuser=0&hl=en_US&projectNumber=12679720650&useAdminProxy=true
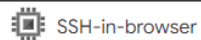
SSH-in-browser

```
      "failed" : 0
    },
    "hits" : {
      "total" : {
        "value" : 6,
        "relation" : "eq"
      },
      "max_score" : 1.0,
      "hits" : [
        {
          "_index" : "alumnos",
          "_id" : "6",
          "_score" : 1.0,
          "_source" : {
            "title" : "New Document",
            "content" : "This is a new document for the master class",
            "tag" : [
              "general",
              "testing"
            ]
          }
        },
        {
          "_index" : "alumnos",
          "_id" : "3",
          "_score" : 1.0,
          "_source" : {
            "id" : 3,
            "name" : "Carlos",
            "last_name" : "González"
          }
        },
        {
          "_index" : "alumnos",
          "_id" : "4",
          "_score" : 1.0,
          "_source" : {
            "id" : 4,
            "name" : "María",
            "last_name" : "López"
          }
        },
        {
          "_index" : "alumnos",
          "_id" : "5",
          "_score" : 1.0,
          "_source" : {
            "id" : 5,
            "name" : "Luis",
            "last_name" : "Martínez"
          }
        },
        {
          "_index" : "alumnos",
          "_id" : "7",
          "_score" : 1.0,
          "_source" : {
            "id" : 7,
            "name" : "Sofía",
            "last_name" : "Ramírez"
          }
        },
        {
          "_index" : "alumnos",
          "_id" : "8",
          "_score" : 1.0,
          "_source" : {
            "id" : 8,
            "name" : "Pedro",
            "last_name" : "Hernández"
          }
        }
      ]
    }
  }
}
rubengc2@elastic-practica:~$
```

EJERCICIO 5