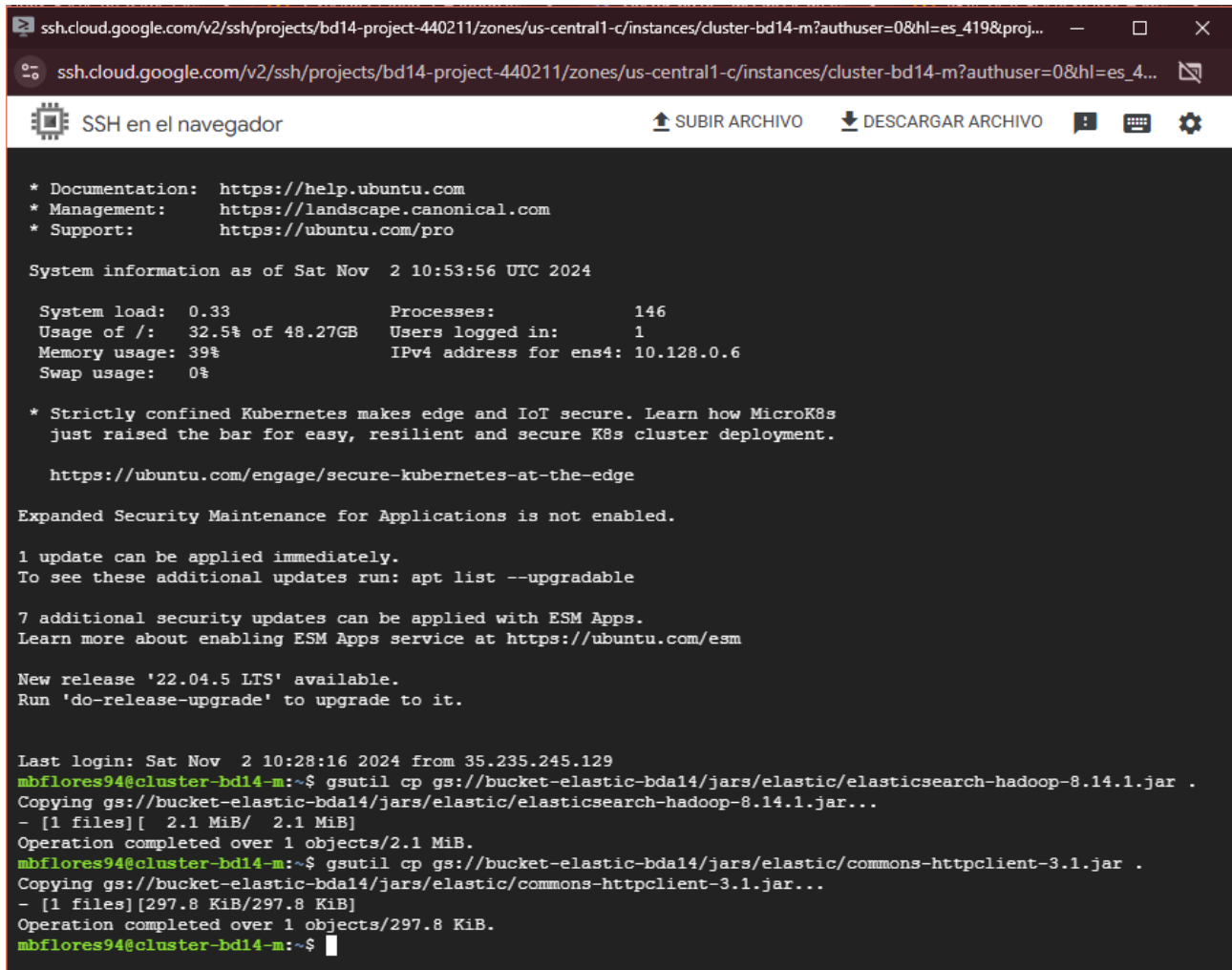


PARTE 1 - Configuración ES-Hadoop



```
ssh.cloud.google.com/v2/ssh/projects/bd14-project-440211/zones/us-central1-c/instances/cluster-bd14-m?authuser=0&hl=es_419&proj...
ssh.cloud.google.com/v2/ssh/projects/bd14-project-440211/zones/us-central1-c/instances/cluster-bd14-m?authuser=0&hl=es_4...

SSH en el navegador SUBIR ARCHIVO DESCARGAR ARCHIVO

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

System information as of Sat Nov 2 10:53:56 UTC 2024

System load: 0.33 Processes: 146
Usage of /: 32.5% of 48.27GB Users logged in: 1
Memory usage: 39% IPv4 address for ens4: 10.128.0.6
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.

1 update can be applied immediately.
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 Nov 2 10:28:16 2024 from 35.235.245.129
mbflores94@cluster-bd14-m:~$ gsutil cp gs://bucket-elastic-bda14/jars/elastic/elasticsearch-hadoop-8.14.1.jar .
Copying gs://bucket-elastic-bda14/jars/elastic/elasticsearch-hadoop-8.14.1.jar...
- [1 files][ 2.1 MiB/ 2.1 MiB]
Operation completed over 1 objects/2.1 MiB.
mbflores94@cluster-bd14-m:~$ gsutil cp gs://bucket-elastic-bda14/jars/elastic/commons-httpclient-3.1.jar .
Copying gs://bucket-elastic-bda14/jars/elastic/commons-httpclient-3.1.jar...
- [1 files][297.8 KiB/297.8 KiB]
Operation completed over 1 objects/297.8 KiB.
mbflores94@cluster-bd14-m:~$
```

PARTE 2 - Configuración server Elasticsearch

```
GNU nano 7.2 /etc/elasticsearch/elasticsearch.yml
#----- BEGIN SECURITY AUTO CONFIGURATION -----
#
# The following settings, TLS certificates, and keys have been automatically
# generated to configure Elasticsearch security features on 02-11-2024 09:36:08
#
# -----
# 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-bda14"]

# 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 -----
```

PARTE 3 - Configuración en Cluster Hadoop de Conexión con ES

```
ssh.cloud.google.com/v2/ssh/projects/bd14-project-440211/zones/us-central1-c/instances/cluster-bd14-m?authuser=0&hl=es_419&proj...
ssh.cloud.google.com/v2/ssh/projects/bd14-project-440211/zones/us-central1-c/instances/cluster-bd14-m?authuser=0&hl=es_4...

SSH en el navegador SUBIR ARCHIVO DESCARGAR ARCHIVO

System information as of Sat Nov 2 11:08:55 UTC 2024

System load: 0.35          Processes:           146
Usage of /: 32.5% of 48.27GB Users logged in:       1
Memory usage: 39%         IPv4 address for ens4: 10.128.0.6
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.

1 update can be applied immediately.
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 Nov 2 10:58:11 2024 from 35.235.241.18
mbflores94@cluster-bd14-m:~$ sudo sed -i '$d' /etc/hive/conf.dist/hive-site.xml
mbflores94@cluster-bd14-m:~$ sudo sed -i '$a \ <property>\n <name>es.nodes</name>\n <value>AQUÍ LA IP DE
ELASTIC</value>\n </property>\n' /etc/hive/conf.dist/hive-site.xml
mbflores94@cluster-bd14-m:~$ sudo sed -i '$a \ <property>\n <name>es.port</name>\n <value>9200</value>\n
</property>\n' /etc/hive/conf.dist/hive-site.xml
mbflores94@cluster-bd14-m:~$ sudo sed -i '$a \ <property>\n <name>es.nodes.wan.only</name>\n <value>>true<
/value>\n </property>\n' /etc/hive/conf.dist/hive-site.xml
mbflores94@cluster-bd14-m:~$ sudo sed -i '$a \ <property>\n <name>hive.aux.jars.path</name>\n <value>/usr/
lib/hive/lib/elasticsearch-hadoop-8.14.1.jar,/usr/lib/hive/lib/commons-httpclient-3.1.jar</value>\n </property>
\n</configuration>' /etc/hive/conf.dist/hive-site.xml
mbflores94@cluster-bd14-m:~$ sudo cp elasticsearch-hadoop-8.14.1.jar /usr/lib/hive/lib/
mbflores94@cluster-bd14-m:~$ sudo cp commons-httpclient-3.1.jar /usr/lib/hive/lib/
mbflores94@cluster-bd14-m:~$ sudo service hive-server2 restart
mbflores94@cluster-bd14-m:~$
```

PARTE 4: Captura de pantalla de la consola del cluster Hadoop con el resultado la consulta.

```
SSH en el navegador SUBIR ARCHIVO DESCARGAR ARCHIVO

mbflores94@cluster-bdl4-m:~$ curl -X POST "34.176.243.82:9200/_bulk" -H 'Content-Type: application/json' -d '
> { "index": { "index": "alumnos", "id": "3" } }
> { "id": 3, "name": "Carlos", "last_name": "González" }
> { "index": { "index": "alumnos", "id": "4" } }
> { "id": 4, "name": "Maria", "last_name": "López" }
> { "index": { "index": "alumnos", "id": "5" } }
> { "id": 5, "name": "Imis", "last_name": "Martínez" }
> { "index": { "index": "alumnos", "id": "7" } }
> { "id": 7, "name": "Sofia", "last_name": "Ramírez" }
> { "index": { "index": "alumnos", "id": "8" } }
> { "id": 8, "name": "Pedro", "last_name": "Hernández" }
>
{"errors":false,"took":5,"items":[{"index":{"index":"alumnos","id":"3","version":4,"result":"updated","shards":{"total":2,"successful":1,"failed":0},"seq_no":19,"primary_term":1,"status":200}},{"index":{"index":"alumnos","id":"4","version":4,"result":"updated","shards":{"total":2,"successful":1,"failed":0},"seq_no":20,"primary_term":1,"status":200}},{"index":{"index":"alumnos","id":"5","version":4,"result":"updated","shards":{"total":2,"successful":1,"failed":0},"seq_no":21,"primary_term":1,"status":200}},{"index":{"index":"alumnos","id":"7","version":4,"result":"updated","shards":{"total":2,"successful":1,"failed":0},"seq_no":22,"primary_term":1,"status":200}},{"index":{"index":"alumnos","id":"8","version":4,"result":"updated","shards":{"total":2,"successful":1,"failed":0},"seq_no":23,"primary_term":1,"status":200}}]}mbflores94@cluster-bdl4-m:~$ curl -X GET "http://34.176.243.82:9200/alumnos/_search?pretty"
{
  "took": 19,
  "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": "Maria",
          "last_name": "López"
        }
      },
      {
        "index": "alumnos",
        "id": "5",
        "score": 1.0,
        "source": {
          "id": 5,
          "name": "Imis",
          "last_name": "Martínez"
        }
      },
      {
        "index": "alumnos",
        "id": "7",
        "score": 1.0,
        "source": {
          "id": 7,
          "name": "Sofia",
          "last_name": "Ramírez"
        }
      },
      {
        "index": "alumnos",
        "id": "8",
        "score": 1.0,
        "source": {
          "id": 8,
          "name": "Pedro",
          "last_name": "Hernández"
        }
      }
    ]
  }
}
mbflores94@cluster-bdl4-m:~$
```