PRÁCTICA BIG DATA ARCHITECTURE

- PARTE 1 - Configuración ES-Hadoop

ENTREGABLE PARTE 1: Captura de pantalla de la consola SSH del clúster Hadoop una vez finalizada la configuración y carga.

```
dealva_pablo@es-hadoop-m:~$ gsutil cp gs://dataproc-staging-us-central1-279930953649-1egwzmff/elasticsearch-hadoo
p-8.14.1.jar .
Copying gs://dataproc-staging-us-central1-279930953649-1egwzmff/elasticsearch-hadoop-8.14.1.jar...
/ [1 files][  2.1 MiB/  2.1 MiB]
Operation completed over 1 objects/2.1 MiB.
dealva_pablo@es-hadoop-m:~$ gsutil cp gs://dataproc-staging-us-central1-279930953649-1egwzmff/commons-httpclient-
3.1.jar .
Copying gs://dataproc-staging-us-central1-279930953649-1egwzmff/commons-httpclient-3.1.jar...
/ [1 files][297.8 KiB/297.8 KiB]
Operation completed over 1 objects/297.8 KiB.
dealva_pablo@es-hadoop-m:~$
```

- PARTE 2 - Configuración server Elasticsearch

ENTREGABLE PARTE 2: Captura de pantalla de la consola del server Elastic donde se vea la configuración de elastic, desde 'Enable security features' hasta el final (el fichero elasticsearch.yml) abierta.(Recordad: Comando sudo cat...)

```
# The following settings, TLS certificates, and keys have been automatically
# generated to configure Elasticsearch security features on 03-11-2024 10:20:19
#
# --------------------------------------------------------------------------------

# Enable security features
xpack.security.enabled: false

xpack.security.enrollment.enabled: false

# Enable encryption for HTTP API client connections, such as Kibana, Logstash, and Agents
xpack.security.http.ssl:
  enabled: true
  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: ["elasticsearch"]

# 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
```

- PARTE 3 - Configuración en Cluster Hadoop de Conexión con ES

ENTREGABLE PARTE 3: Captura de pantalla del proceso de configuración en Cluster Hadoop de Conexión con ES completo.

```
dealva_pablo@es-hadoop-m:~$ sudo sed -i '$d' /etc/hive/conf.dist/hive-site.xml
dealva_pablo@es-hadoop-m:~$ sudo sed -i '$d' /etc/hive/conf.dist/hive-site.xml
dealva_pablo@es-hadoop-m:~$ sudo sed -i '$a \  <property>\n    <name>es.nodes</name>\n    <value>AQUÍ LA IP DE EL
ASTIC</value>\n  </property>\n' /etc/hive/conf.dist/hive-site.xml
dealva_pablo@es-hadoop-m:~$ sudo sed -i '$a \  <property>\n    <name>es.port</name>\n    <value>9200</value>\n  <
/property>\n' /etc/hive/conf.dist/hive-site.xml
dealva_pablo@es-hadoop-m:~$ sudo sed -i '$a \  <property>\n    <name>es.nodes.wan.only</name>\n    <value>true</v
alue>\n  </property>\n' /etc/hive/conf.dist/hive-site.xml
dealva_pablo@es-hadoop-m:~$ sudo sed -i '$a \  <property>\n    <name>hive.aux.jars.path</name>\n   <value>/usr/li
b/hive/lib/elasticsearch-hadoop-8.14.1.jar,/usr/lib/hive/lib/commons-httpclient-3.1.jar</value>\n  </property>\n<
/configuration>' /etc/hive/conf.dist/hive-site.xml
dealva_pablo@es-hadoop-m:~$ sudo cp elasticsearch-hadoop-8.14.1.jar /usr/lib/hive/lib/
dealva_pablo@es-hadoop-m:~$ sudo cp commons-httpclient-3.1.jar /usr/lib/hive/lib/
dealva_pablo@es-hadoop-m:~$ sudo service hive-server2 restart
dealva_pablo@es-hadoop-m:~$
```

- PARTE 4 - A conectar datos!

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

```
dealva_pablo@elasticsearch:~$ curl -X GET "http://34.44.49.211:9200/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"
        }
      },
      {
```

- PARTE 5 - Opcional. KIBANA!

ENTREGABLE 5: Opcional. Captura de pantalla de la consola de Kibana con alguna visualización sencilla.