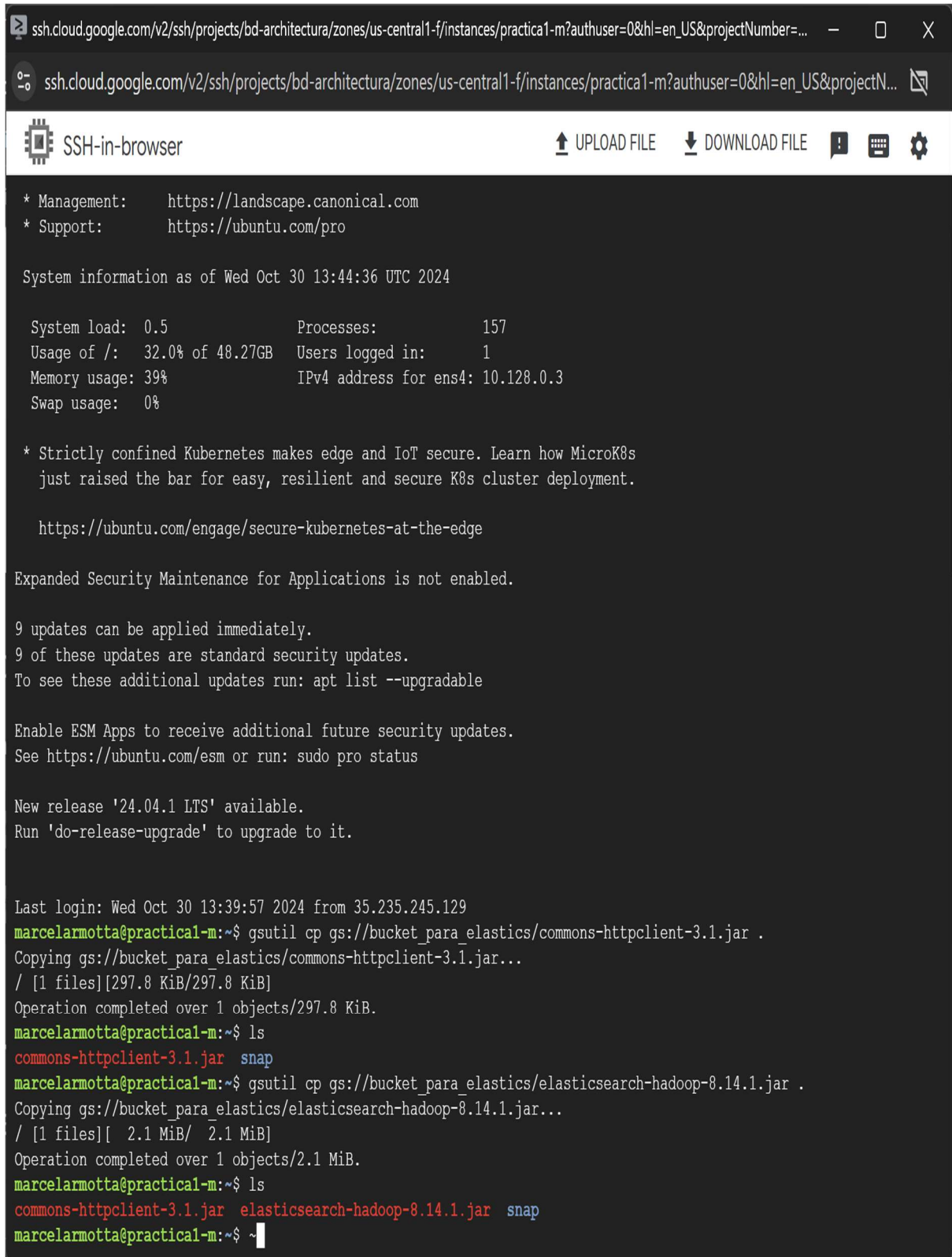


Solución a ejercicios prácticos

Solución Parte 1:



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

System information as of Wed Oct 30 13:44:36 UTC 2024

System load:  0.5               Processes:            157
Usage of /:   32.0% of 48.27GB   Users logged in:     1
Memory usage: 39%              IPv4 address for ens4: 10.128.0.3
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.

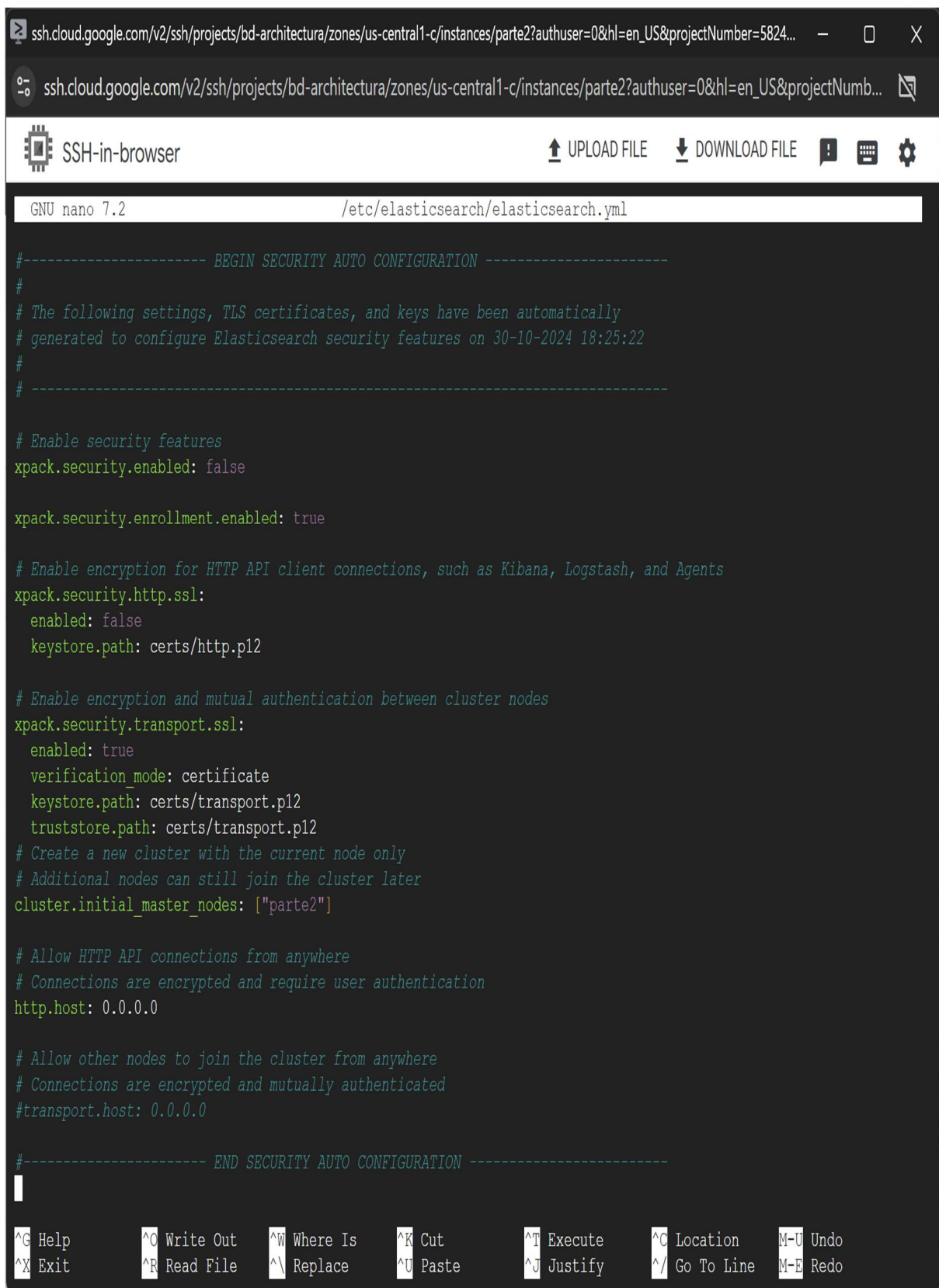
9 updates can be applied immediately.
9 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Wed Oct 30 13:39:57 2024 from 35.235.245.129
marcelarmotta@practica1-m:~$ gsutil cp gs://bucket_para_elastics/commons-httpclient-3.1.jar .
Copying gs://bucket_para_elastics/commons-httpclient-3.1.jar...
/ [1 files][297.8 KiB/297.8 KiB]
Operation completed over 1 objects/297.8 KiB.
marcelarmotta@practica1-m:~$ ls
commons-httpclient-3.1.jar  snap
marcelarmotta@practica1-m:~$ gsutil cp gs://bucket_para_elastics/elasticsearch-hadoop-8.14.1.jar .
Copying gs://bucket_para_elastics/elasticsearch-hadoop-8.14.1.jar...
/ [1 files][ 2.1 MiB/ 2.1 MiB]
Operation completed over 1 objects/2.1 MiB.
marcelarmotta@practica1-m:~$ ls
commons-httpclient-3.1.jar  elasticsearch-hadoop-8.14.1.jar  snap
marcelarmotta@practica1-m:~$ ~
```

Solución parte 2:

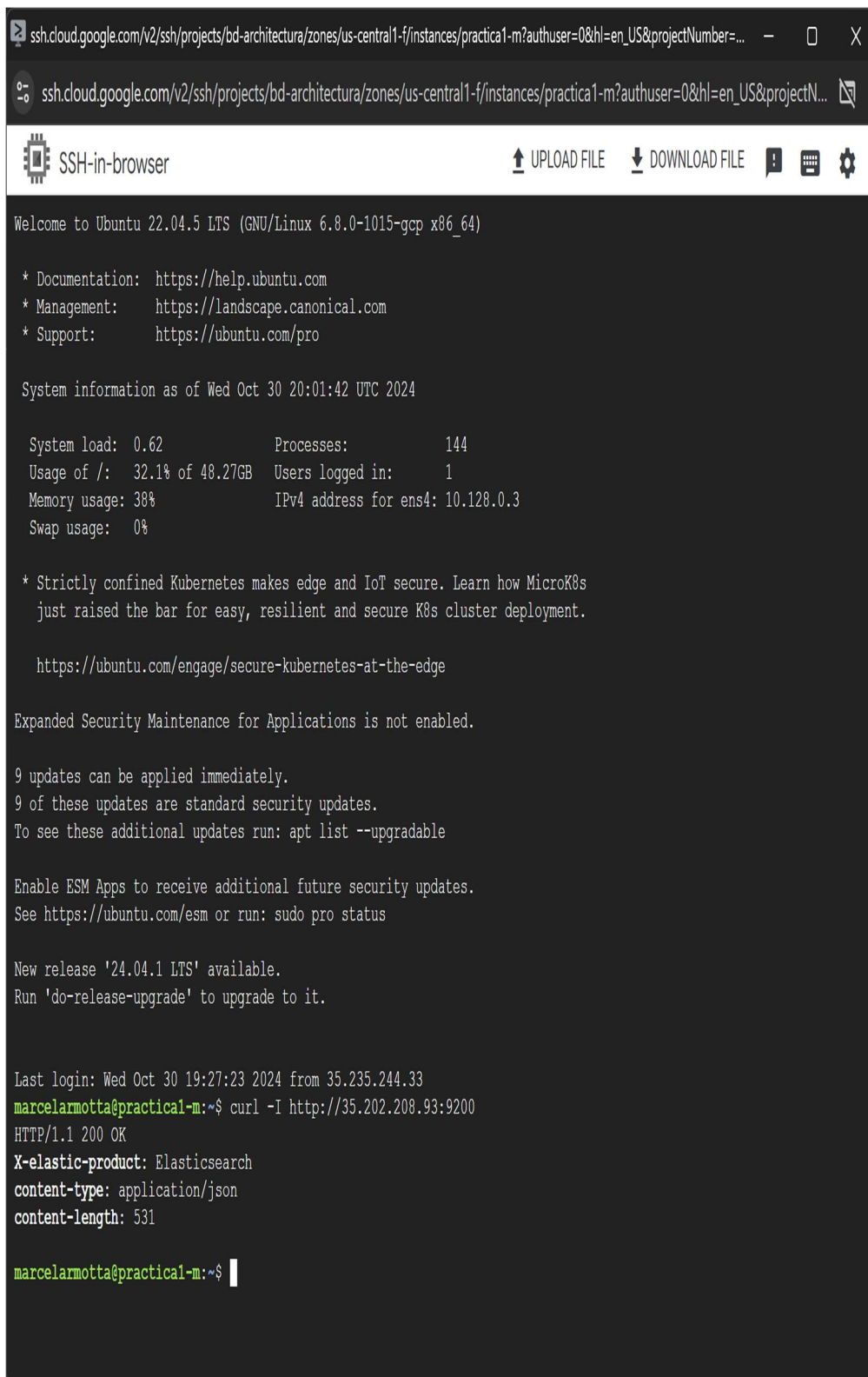


The screenshot shows a web browser window with the address bar displaying `ssh.cloud.google.com/v2/ssh/projects/bd-architectura/zones/us-central1-c/instances/parte2?authuser=0&hl=en_US&projectNumber=5824...`. The browser's title bar indicates "SSH-in-browser". The main content area shows a terminal window with the GNU nano 7.2 editor open to the file `/etc/elasticsearch/elasticsearch.yml`. The editor displays a configuration file for Elasticsearch security features, including comments about automatic configuration and settings for enabling security, encryption, and cluster authentication. The bottom of the screen shows a row of keyboard shortcuts for the nano editor.

```
#----- BEGIN SECURITY AUTO CONFIGURATION -----  
#  
# The following settings, TLS certificates, and keys have been automatically  
# generated to configure Elasticsearch security features on 30-10-2024 18:25:22  
#  
# -----  
  
# 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: ["parte2"]  
  
# 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 -----  
|
```

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo
^X Exit	^R Read File	^N Replace	^U Paste	^J Justify	^/_ Go To Line	M-E Redo

Anexo: Comprobación de server elastic:



```
ssh.cloud.google.com/v2/ssh/projects/bd-architectura/zones/us-central1-f/instances/practica1-m?authuser=0&hl=en_US&projectNumber=...  
SSH-in-browser  
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 6.8.0-1015-gcp x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/pro  
  
System information as of Wed Oct 30 20:01:42 UTC 2024  
  
System load:  0.62          Processes:            144  
Usage of /:   32.1% of 48.27GB Users logged in:        1  
Memory usage: 38%          IPv4 address for ens4: 10.128.0.3  
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.  
  
9 updates can be applied immediately.  
9 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
New release '24.04.1 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Last login: Wed Oct 30 19:27:23 2024 from 35.235.244.33  
marcelarmotta@practical-m:~$ curl -I http://35.202.208.93:9200  
HTTP/1.1 200 OK  
X-elastic-product: Elasticsearch  
content-type: application/json  
content-length: 531  
  
marcelarmotta@practical-m:~$
```

Solución parte 3:

```
ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura/zones/us-central1-f/instances/practica1-m?authuser=0&hl=en_US&projectNumber=582464280939&useAdminProxy=true&pageViewId=7AE4731F-A4A0-494F-B318-BB90DC443B2D - ...  
ssh.cloud.google.com/v2/ssh/projects/bd-arquitectura/zones/us-central1-f/instances/practica1-m?authuser=0&hl=en_US&projectNumber=582464280939&useAdminProxy=true&pageViewId=7AE4731F-A4A0-494F-B...  
SSH-in-browser  
↑ UPLOAD FILE ↓ DOWNLOAD FILE ⓘ ⌵ ⚙  
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 6.8.0-1015-gcp x86_64)  
  
* Documentation: https://help.ubuntu.com  
* Management: https://landscape.canonical.com  
* Support: https://ubuntu.com/pro  
  
System information as of Wed Oct 30 21:19:29 UTC 2024  
  
System load: 0.18 Processes: 141  
Usage of /: 32.2% of 48.27GB Users logged in: 0  
Memory usage: 39% IPv4 address for ens4: 10.128.0.3  
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.  
  
9 updates can be applied immediately.  
9 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
New release '24.04.1 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Last login: Wed Oct 30 20:13:56 2024 from 35.235.245.128  
marcelarmotta@practical-m:~$ sudo sed -i '$d' /etc/hive/conf.dist/hive-site.xml  
marcelarmotta@practical-m:~$ sudo sed -i '$a \ <property>\n <name>es.nodes</name>\n <value>AQUÍ IA IP DE ELASTIC</value>\n </property>\n' /etc/hive/conf.dist/hive-site.xml  
^C  
marcelarmotta@practical-m:~$ sudo sed -i '$a \ <property>\n <name>es.nodes</name>\n <value>35.202.208.93</value>\n </property>\n' /etc/hive/conf.dist/hive-site.xml  
marcelarmotta@practical-m:~$ sudo sed -i '$a \ <property>\n <name>es.port</name>\n <value>9200</value>\n </property>\n' /etc/hive/conf.dist/hive-site.xml  
marcelarmotta@practical-m:~$ sudo sed -i '$a \ <property>\n <name>es.nodes.wan.only</name>\n <value>true</value>\n </property>\n' /etc/hive/conf.dist/hive-site.xml  
marcelarmotta@practical-m:~$ sudo sed -i '$a \ <property>\n <name>hive.aux.jars.path</name>\n <value>/usr/lib/hive/lib/elasticsearch-hadoop-8.14.1.jar,/usr/lib/hive/lib/common  
s-httpclient-3.1.jar</value>\n </property>\n</configuration>' /etc/hive/conf.dist/hive-site.xml  
marcelarmotta@practical-m:~$ sudo cp elasticsearch-hadoop-8.14.1.jar /usr/lib/hive/lib/  
marcelarmotta@practical-m:~$ sudo cp commons-httpclient-3.1.jar /usr/lib/hive/lib/  
marcelarmotta@practical-m:~$ sudo service hive-server2 restart  
marcelarmotta@practical-m:~$
```

Solución parte 4:



```
ssh.cloud.google.com/v2/ssh/projects/bd-architectura/zones/us-central1-f/instances/practica1-m?authuser=0&hl=en_US&projectNumber=582464280939&useAdminProxy=true - Google Chrome
ssh.cloud.google.com/v2/ssh/projects/bd-architectura/zones/us-central1-f/instances/practica1-m?authuser=0&hl=en_US&projectNumber=582464280939&useAdminProxy=true

SSH-in-browser

UPLOAD FILE DOWNLOAD FILE

marcelarmotta@practica1-m:~$ curl -X GET "http://35.202.208.93:9200/alumnos/_search?pretty"
{
  "took": 8,
  "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"
        }
      }
    ]
  }
}
```



```
    "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"
    }
  }
]
}
}
}
marcelarmotta@practical-m:~$
```


Solución parte 5:

