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agence nationale de réglementation des télécommunications
الوكالة الوطنية لتقنين المواصلات

INPT
المعهد الوطني للبريد والمواصلات
Institut National des Postes et Télécommunications

Projet scala :

Traitement en temps réel avec spark streaming

Réaliser par :

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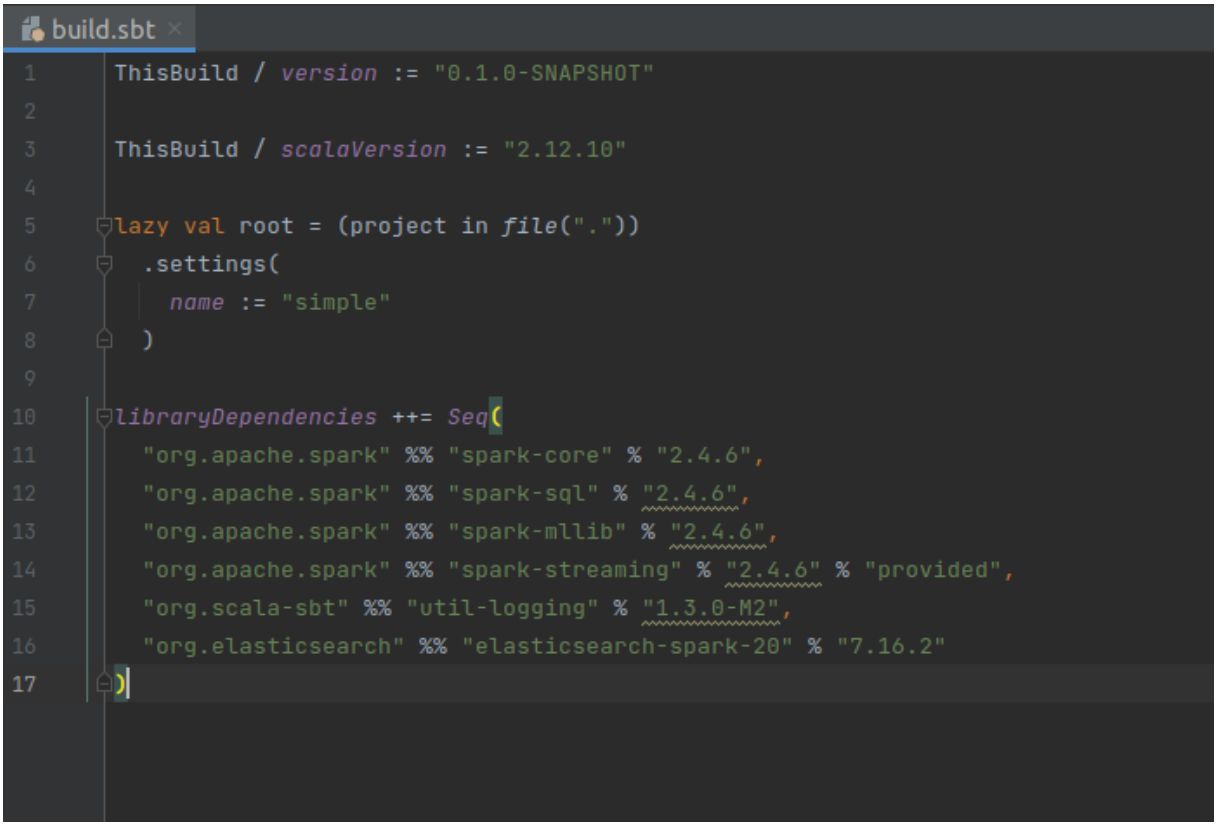
Nous ajoutons spark dépendances pour l’utiliser comme une librairie dans notre application scala



Importation du librairies nécessaire pour le projet

```
import org.apache.spark.sql.SparkSession
import org.apache.spark.sql.types._
import org.apache.spark.streaming
import org.apache.spark.sql.functions._
import org.apache.log4j._
import org.elasticsearch.spark.sql._
```

Création d'une spark session

```
object Main {

  def main(args: Array[String]): Unit = {

    val spark = SparkSession.builder().master( master = "local[*]").appName( name = "first")
      .config("spark.es.nodes","localhost")
      .config("spark.es.port","9200")
      .getOrCreate()
    Logger.getLogger( name = "org").setLevel(Level.ERROR)
```

Création du dataframe

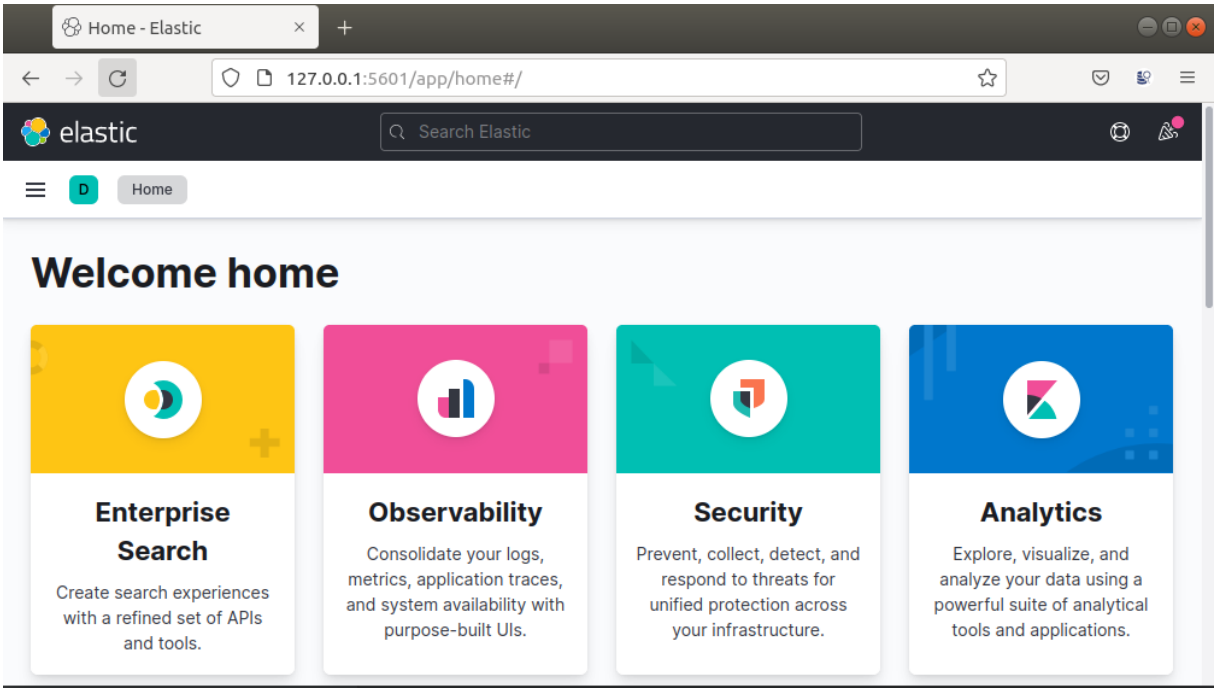
```
  //Create DataFrame
  val StreamDF = spark
    .readStream.option("delimiter", " ")
    .schema(schema)
    .csv( path = "/home/benaich/Documents/simple/logs")
  StreamDF.createOrReplaceTempView( viewName = "SDF")
  val outDF = spark.sql( sqlText = "select * from SDF")
```

Transfère du dataframe vers elasticSearch en mode streaming

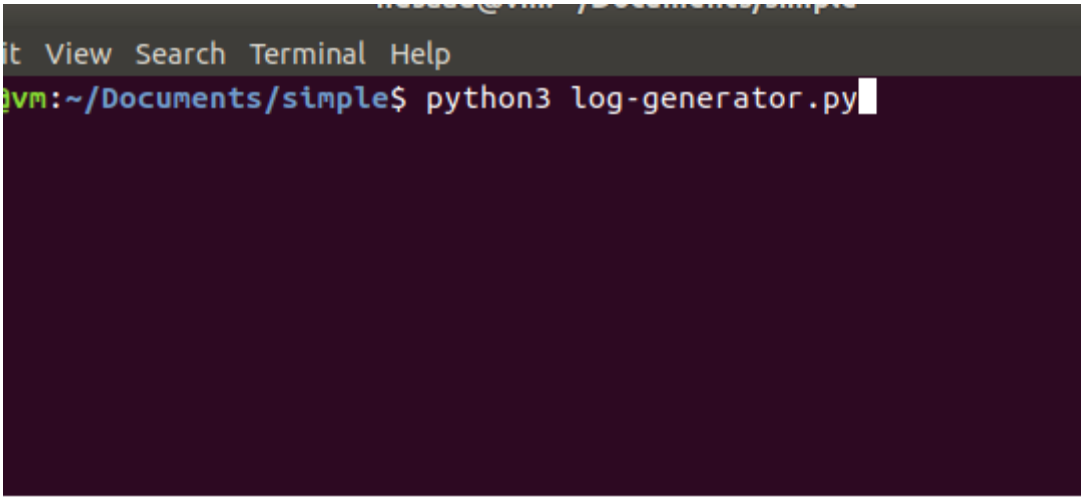
```
//write DF to elasticSearch
var query = outDF.writeStream
.outputMode( outputMode = "append")
.queryName( queryName = "writing_to_es")
.format( source = "org.elasticsearch.spark.sql")
.option("checkpointLocation", "/tmp/")
.option("es.resource", "logs/doc")
.option("es.nodes", "localhost")
.start()

query.awaitTermination()
```

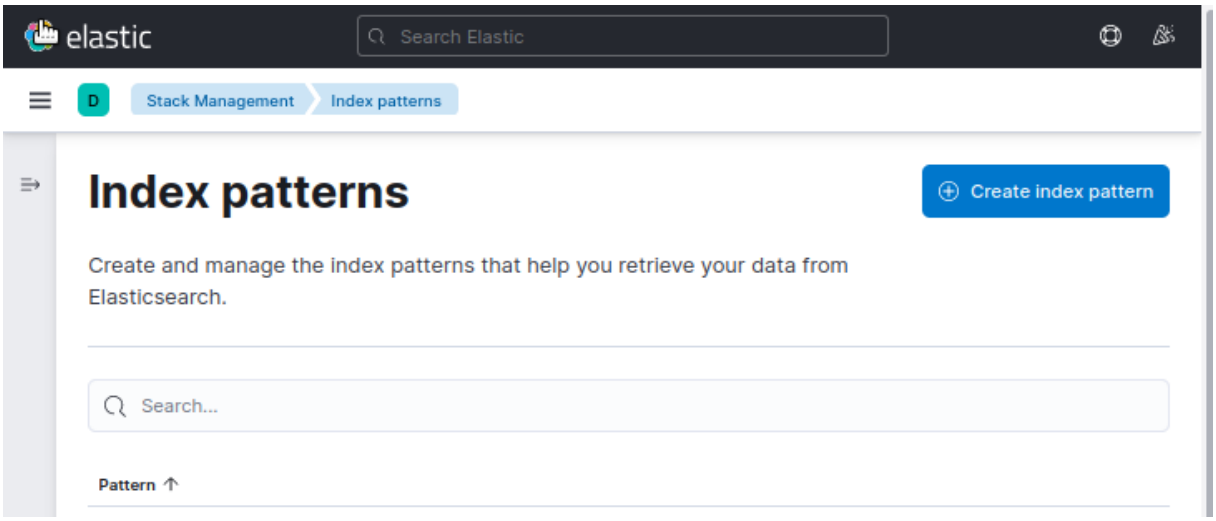
elasticSearch visualisation



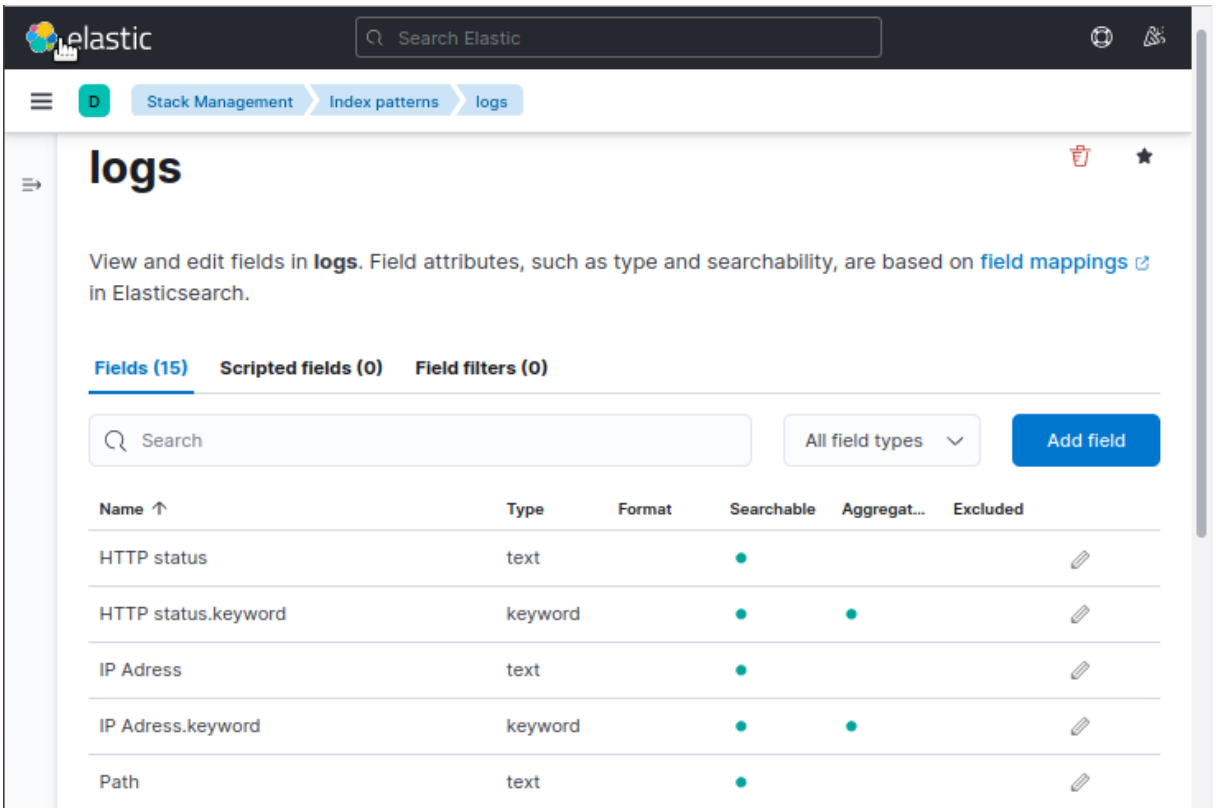
Lancement du log



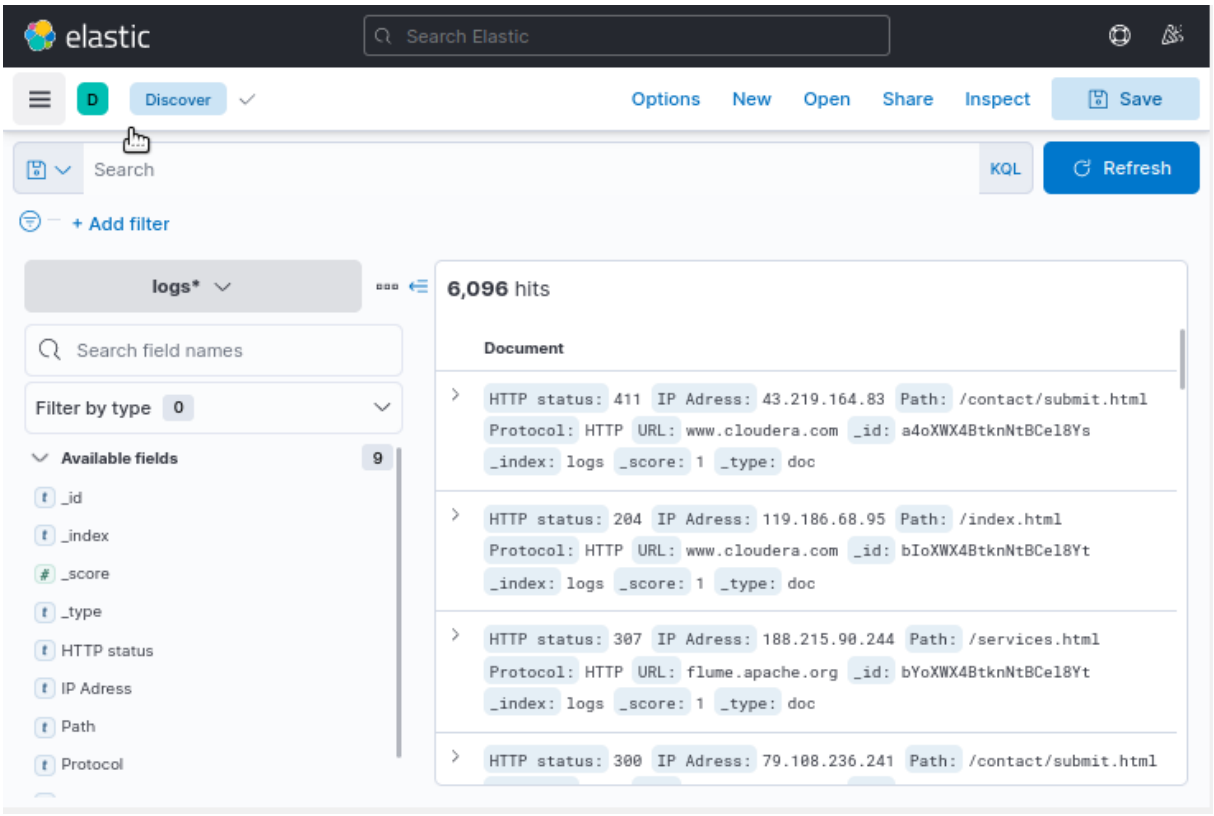
Puis en transfère les log vers le répertoire



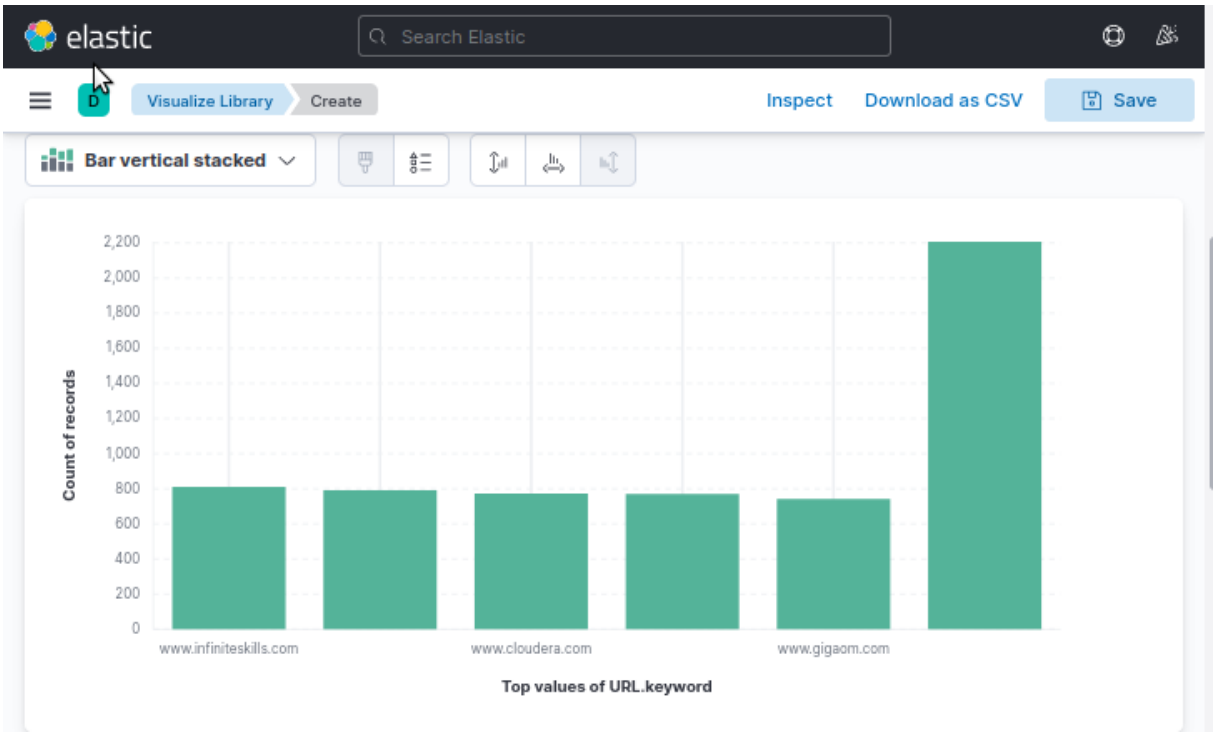
Récupération du donnes par sur kibana

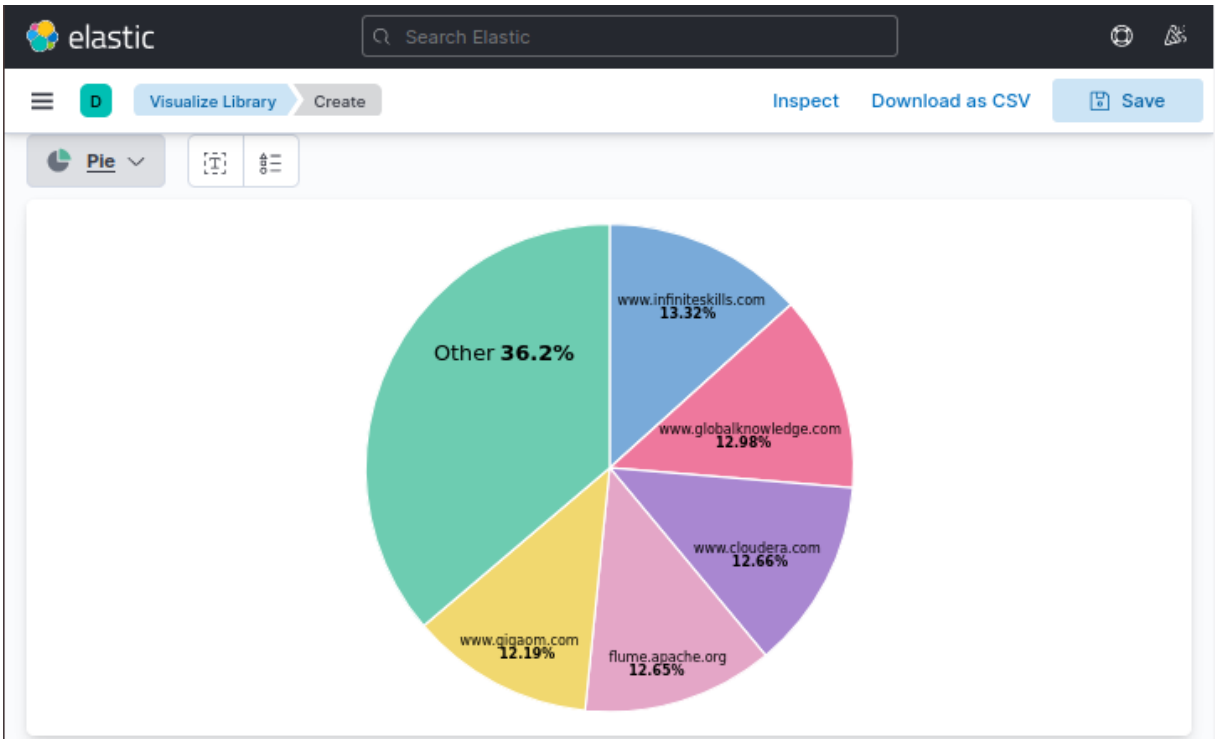


On a reçu 6096 enregistrements ,on va faire la visualisation de ces enregistrements

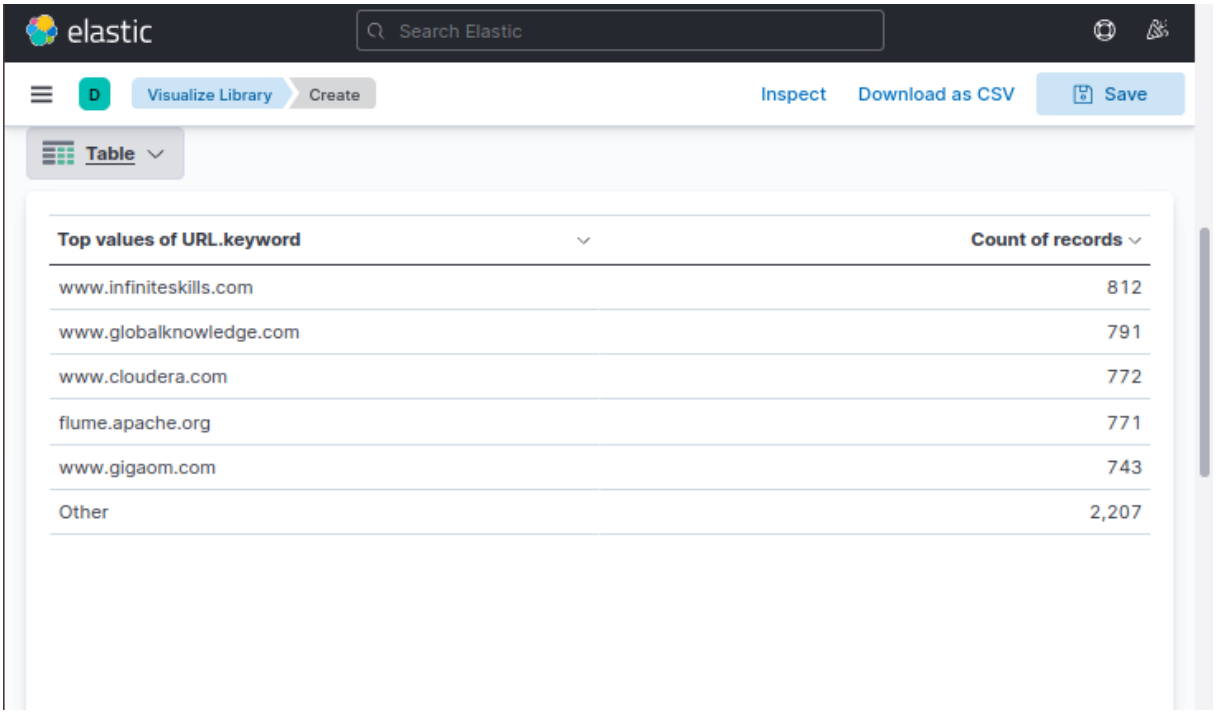


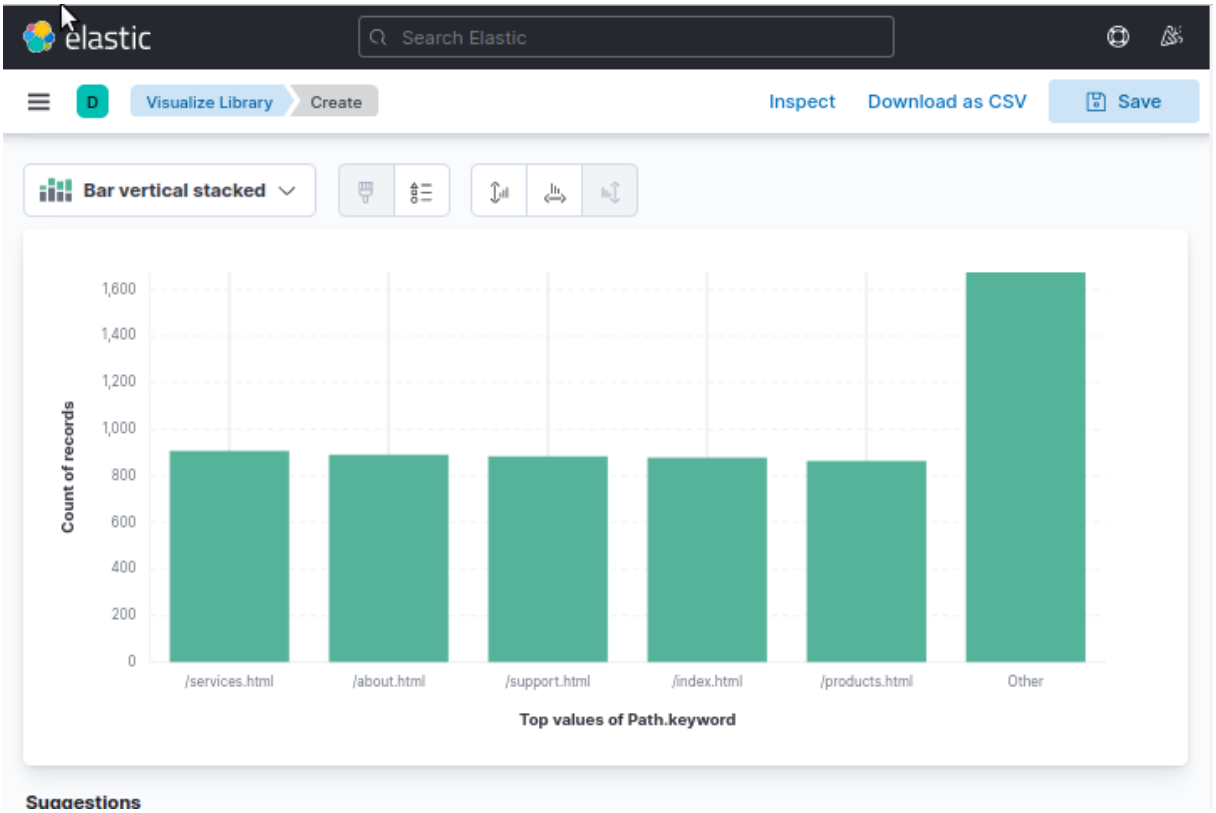
Visualisation :

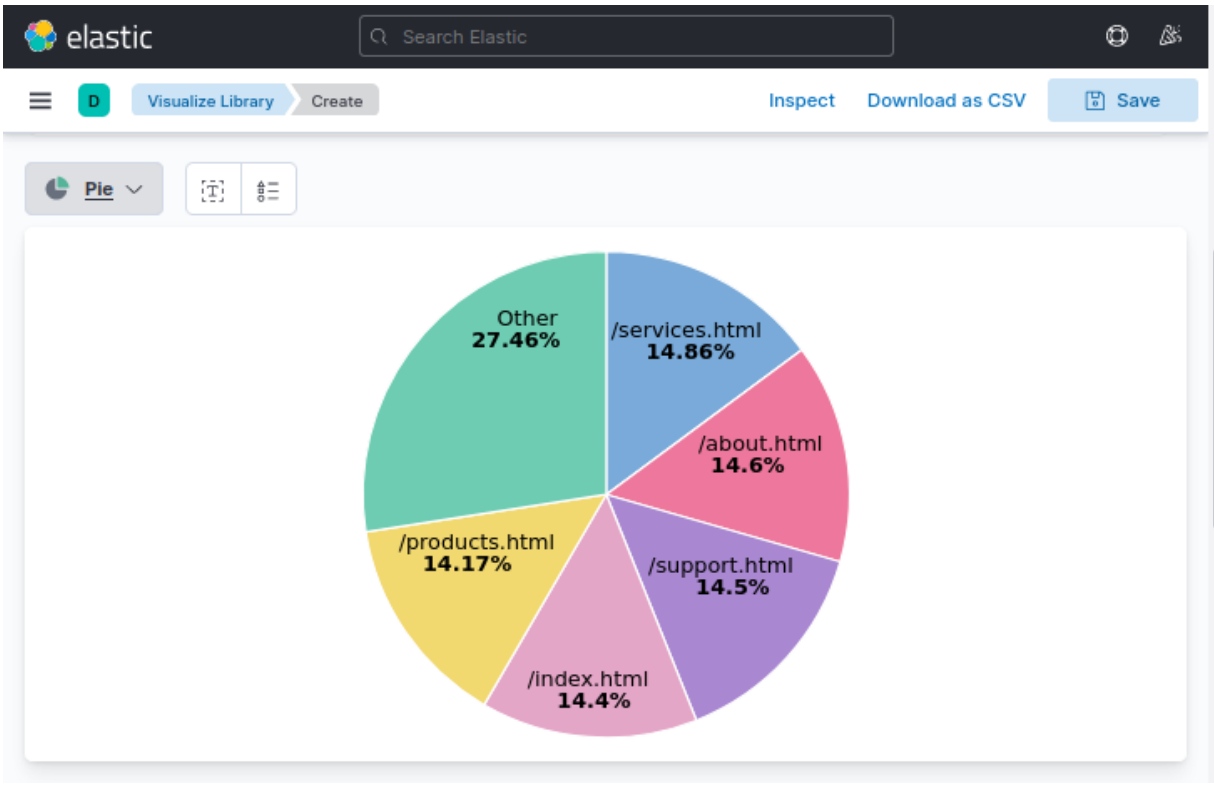




Nombres des enregistrement






elastic
Search Elastic
D
Visualize Library
Create
Inspect
Download as CSV
Save
Pie
Other
27.46%
/services.html
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/support.html
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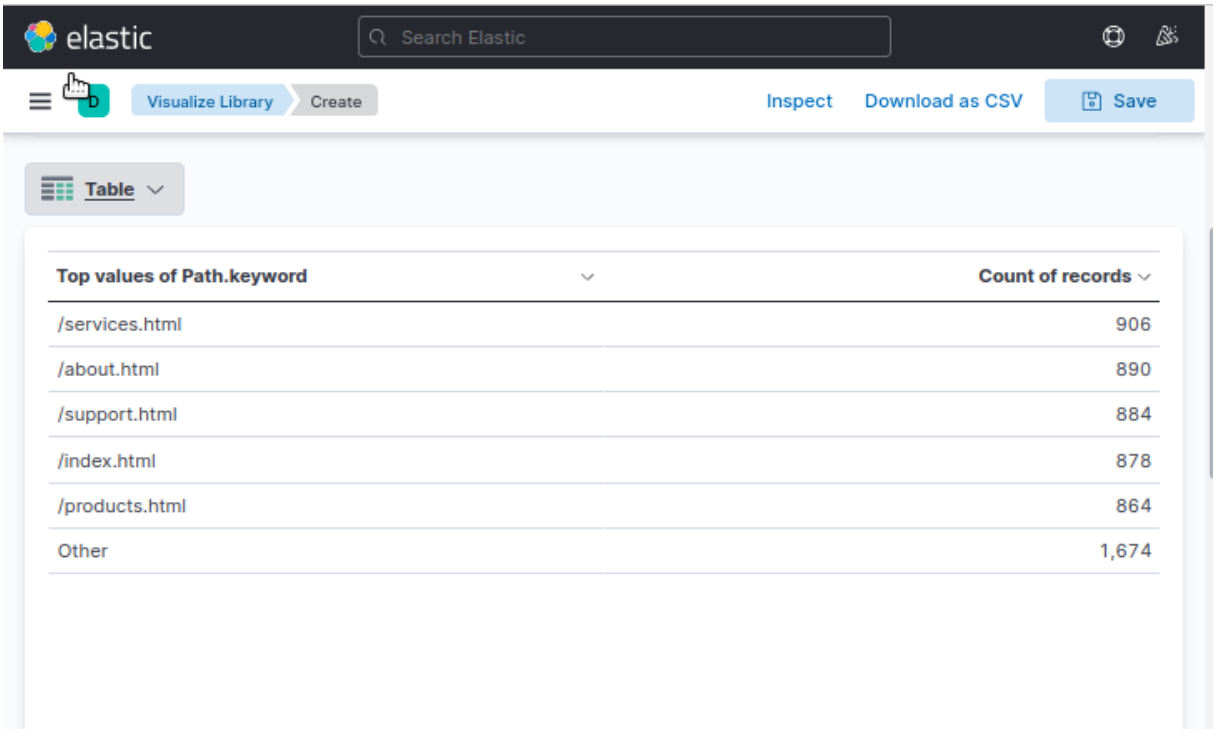
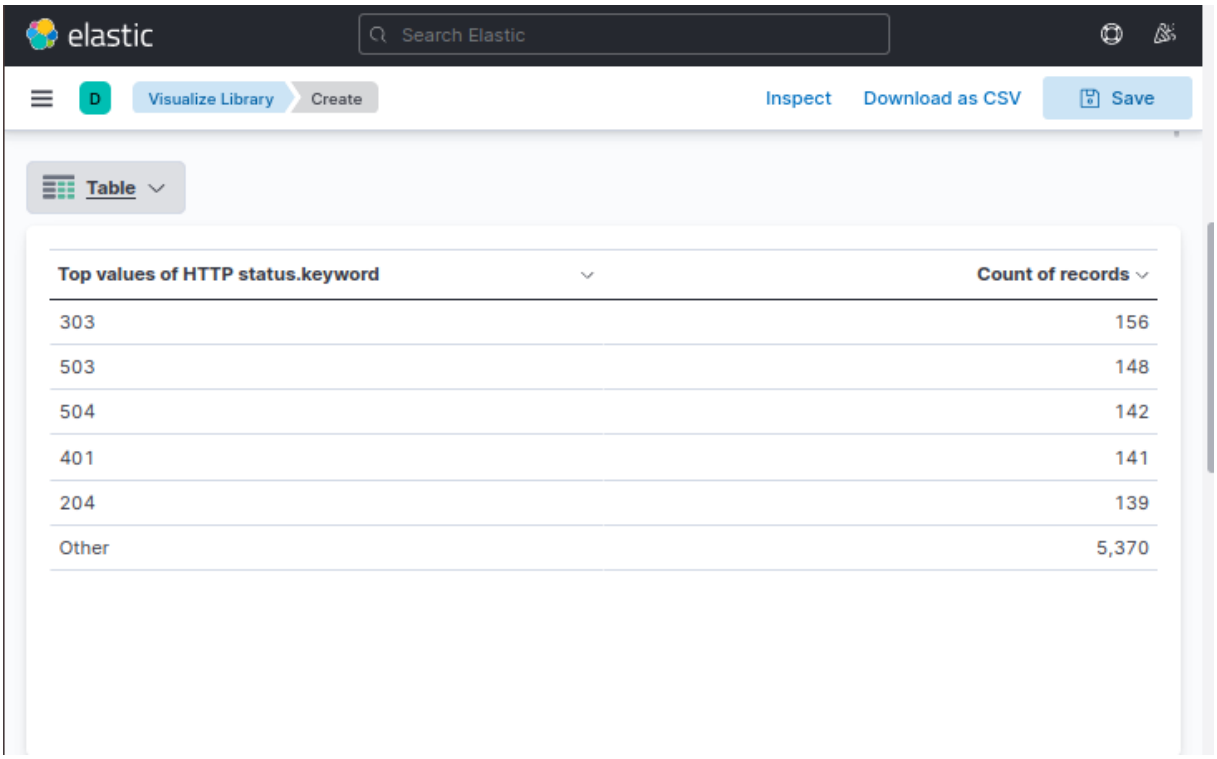

elastic
Search Elastic
D
Visualize Library
Create
Inspect
Download as CSV
Save
Table
Top values of Path.keyword
Count of records
/services.html 906
/about.html 890
/support.html 884
/index.html 878
/products.html 864
Other 1,674


elastic
Search Elastic
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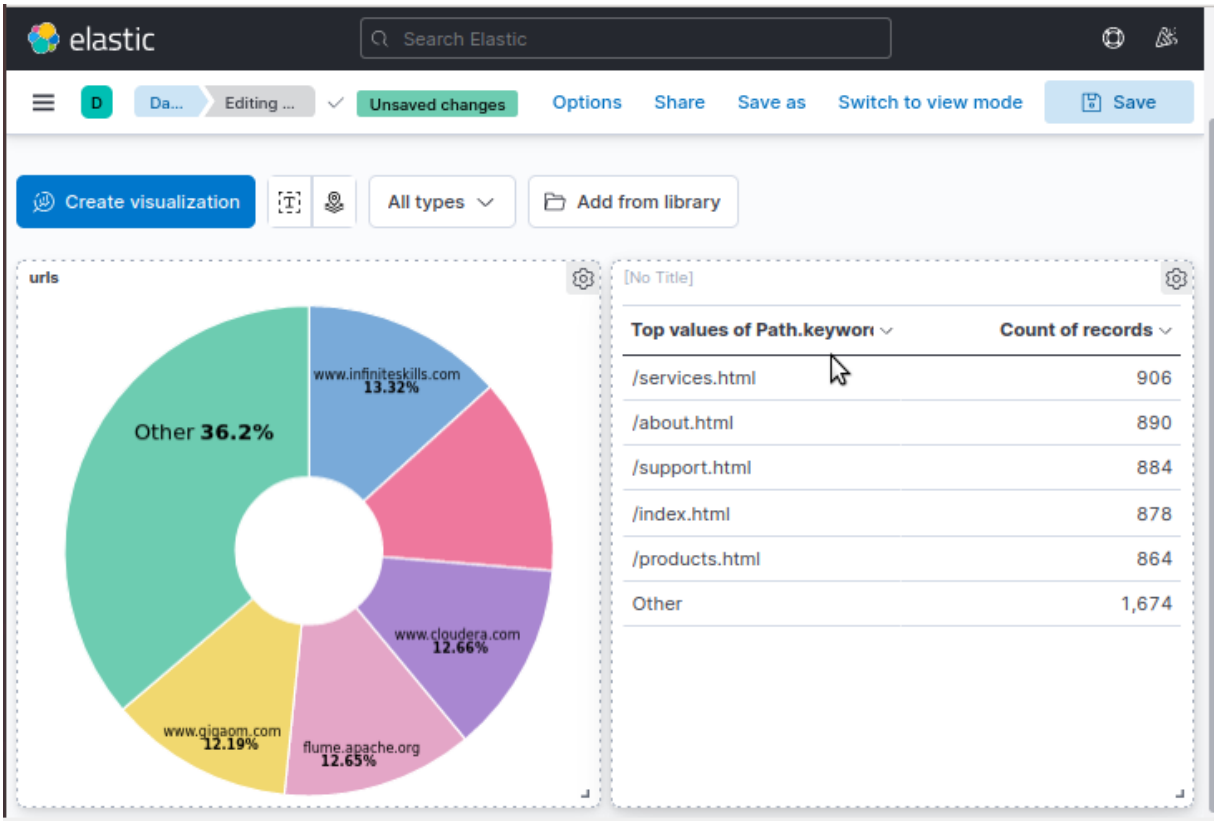
Visualize Library
Create
Inspect
Download as CSV
Save
Table
Top values of HTTP status.keyword
Count of records
303 156
503 148
504 142
401 141
204 139
Other 5,370


elastic
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Editing ...
Unsaved changes
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Share
Save as
Switch to view mode
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Create visualization
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Other 36.2%
www.cloudera.com 12.66%
www.gigaom.com 12.19%
flume.apache.org 12.65%
[No Title]
Top values of Path.keywor
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/products.html 864
Other 1,674