Chapitre 1

Première utilisation

A propos les données utilisées

```
root
|-- af: long (nullable = true)
l-- dst_addr: string (nullable = true)
l-- dst_name: string (nullable = true)
|-- endtime : long (nullable = true)
|-- from: string (nullable = true)
|-- fw: long (nullable = true)
|--| lts: long (nullable = true)
l-- msm_id : long (nullable = true)
l-- msm_name: string (nullable = true)
l-- paris_id: long (nullable = true)
l-- prb_id: long (nullable = true)
l-- proto : string (nullable = true)
l-- result : array (nullable = true)
    |-- element: struct (containsNull = true)
1
         l-- error: string (nullable = true)
         |-- hop: long (nullable = true)
          |--| result: array (nullable = true)
              |-- element : struct (containsNull = true)
          |--| dup: boolean (nullable = true)
          1
               |-- err: string (nullable = true)
                    |-- from: string (nullable = true)
               1
                    |-- icmpext: struct (nullable = true)
                         |-- obj: array (nullable = true)
                              |-- element: struct (contains Null = true)
                                  |-- class: long (nullable = true)
                              1
                         1
                                   |-- mpls: array (nullable = true)
                    1
                         П
                              |-- element: struct (containsNull = true)
                                   |-- exp: long (nullable = true)
                    1
                              Т
                                   |-- label: long (nullable = true)
                    1
                         1
                              Т
                                   1
                                        1
                                   |-- s: long (nullable = true)
                                             |-- ttl: long (nullable = true)
                                   |-- type: long (nullable = true)
                              |--| rfc4884: long (nullable = true)
                         |-- version: long (nullable = true)
                    |-- ittl: long (nullable = true)
                    |-- late: long (nullable = true)
               1
                    |-- rtt : double (nullable = true)
               1
                    |-- size: long (nullable = true)
                    |--| ttl: long (nullable = true)
                    |-- x: string (nullable = true)
|-- size: long (nullable = true)
I-- src_addr: string (nullable = true)
l-- timestamp: long (nullable = true)
l-- type: string (nullable = true)
```