

**TRANSFORM EXCEL  
SHEETS INTO STUNNING  
ELK DASHBOARDS**

**WHO AM I?**



# **SINGLE RESOLUTION BOARD**



The SRB is the central resolution authority within the Banking Union.

visit: <http://srb.europa.eu>

# DISCLAIMER

The SRB processes personal data in line with Regulation (EU) 2018/1725. For any further information you can consult the Data Protection Disclaimer on the SRB webpage.

**Therefore this presentation has no real users' data!**

**STORY**



# HOW MUCH DO WE SPEND?

- sum up all the invoices

# WHAT ABOUT DETAILS?

- digging data with MS Excel

# ASK AN IT FRIEND?

- IT Unit

**AN INVOICE**

411\_M1D5\_CDR\_619042844\_000001\_201802 - Excel

FileHomeInsertPage LayoutFormulasDataReviewViewTell me what you want to do...

theProvider

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	theProvide	theInsitute	theOriginat	theOriginat	theInvoiceF	theServiceC	theProduct	theProduct	theProduct	theTypeOf	theStartDa	theStartTin	theDestina	theDestina	thePeriod	theDuratio	theCatalog	theBillablet
2	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180101	12:31:09	3,23E+09	Belgium	201802	78	0,033	78
3	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180101	12:32:10	3,23E+09	Belgium	201802	83	0,033	83
4	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180102	12:32:12	3,23E+09	Belgium	201802	98	0,033	98
5	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180102	12:33:10	3,23E+09	Belgium	201802	76	0,033	76
6	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180104	12:31:10	3,23E+09	Belgium	201802	80	0,033	80
7	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180104	12:32:11	3,23E+09	Belgium	201802	83	0,033	83
8	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180105	12:32:12	3,23E+09	Belgium	201802	77	0,033	77
9	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180105	12:33:10	3,23E+09	Belgium	201802	78	0,033	78
10	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180107	12:31:10	3,23E+09	Belgium	201802	77	0,033	77
11	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180107	12:32:11	3,23E+09	Belgium	201802	85	0,033	85
12	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180108	12:32:12	3,23E+09	Belgium	201802	76	0,033	76
13	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180108	12:33:10	3,23E+09	Belgium	201802	78	0,033	78
14	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180110	12:31:09	3,23E+09	Belgium	201802	77	0,033	77
15	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180110	12:32:11	3,23E+09	Belgium	201802	83	0,033	83
16	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180111	12:32:11	3,23E+09	Belgium	201802	79	0,033	79
17	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180111	12:33:09	3,23E+09	Belgium	201802	80	0,033	80
18	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180113	12:31:09	3,23E+09	Belgium	201802	78	0,033	78
19	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180113	12:32:11	3,23E+09	Belgium	201802	85	0,033	85
20	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180114	12:32:11	3,23E+09	Belgium	201802	78	0,033	78
21	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180114	12:33:09	3,23E+09	Belgium	201802	76	0,033	76
22	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180116	12:31:11	3,23E+09	Belgium	201802	80	0,033	80
23	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180116	12:32:12	3,23E+09	Belgium	201802	83	0,033	83
24	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180117	12:32:12	3,23E+09	Belgium	201802	78	0,033	78
25	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180117	12:33:10	3,23E+09	Belgium	201802	97	0,033	97
26	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180117	18:53:34	3,23E+09	Belgium	201802	33	0,033	33
27	PROXIMUS 619042844	3,22E+09	Belgium	20180101	FixedLine S	12261	45	National	zc	Fixed to fix	20180119	12:31:10	3,23E+09	Belgium	201802	75	0,033	75

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Ready

# 2018

- `$>cat ~/Call_Details_2018.csv | wc -l`

281665

# NUMBER OF COLUMNS

- `$>head -n 1 ~/Call_Details_*.csv | tr ';' '\n'|wc -l`



24

# COLUMNS NAMES

theProvider theInstitute theCircuit theSIMCard  
theInvoicePeriod theServiceClass theCDRCallType  
theCDRService theCDRTariffCode theTransactionDate  
theTransactionTime theCalledNumber theDestination  
theRoamZone theRoamCountry theRoamNetwork thePeriod  
theUnit theDuration theDurationMin theVolume  
theAmount\_Excl theTaxPercentage theIsPrivate

**LOGSTASH**

# LOAD

- file input plugin
- `input { file { path => "/data/Call_Details*.csv" start_position => "beginning" sincedb_path => "/data/CD.since" } }`

# CSV

- csv plugin
- csv { separator => ";" columns => ... }

# TIME

- `date plugin`
- `add_field => { "tempTS" => "%{theTransactionDate} %  
{theTransactionTime}" }`
- `date { match => [ "tempTS", "yyyyMMdd HH:mm:ss" ] target  
=> "@timestamp" remove_field => ["tempTS"] }`

# MOBILE NUMBER

- doesn't mean anything

# NAME

- `Get-ADUser -filter * -Properties "MobilePhone","Name" | where {$_.MobilePhone} | select @{n="MobilePhone";e={$_.MobilePhone.Substring(1)}},"Name" | Export-Csv -Path C:2name -NoTypeInfoInformation -Encoding UTF8`



# THECIRCUIT

- translate plugin
- `translate { dictionary_path => "./phone2name" field => "theCircuit" destination => "CallerName" }`
- `"32476307428","Ivan Davidkov"`

# INTEGERS

- theDurationMin; theVolume; theAmount\_Excl;  
theTaxPercentage

. VS ,

[more about it](#)

# MUTATE + CONVERT

- `mutate_plugin`
- `mutate { convert => { "theAmount_Excl" => "float_eu";  
"theTaxPercentage" => "float_eu"; "theDuration" =>  
"float_eu"; "theDurationMin" => "float_eu"; "theVolume" =>  
"float_eu" } }`

# AUTOMATIZATION

- smb (business units drop new invoices)
- cifs (logstash read from)

**ELASTICSEARCH**



**KIBANA**



# JUST ANOTHER VISUALIZATION

- New Visualization
- Markdown
- [DB1][1]||[DB2][2]||[DB3][3]
- -> [1]: <http://localhost/app/kibana#/dashboard/...>
- -> [2]: <http://localhost/app/kibana#/dashboard/...>
- -> [3]: <http://localhost/app/kibana#/dashboard/...>

# VISUALS

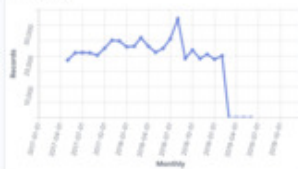


Number of records

490,946

### Experiments

**61,993.423**  
Euro



Total expenses by service type



Total Expenses by Service Type in Euro

Top 20 Called number (records found in logs)



Called number - Top 20

Top 20-Callers (records found in logs)



Caller - Top 20

[voice] Total records

114,764  
Total

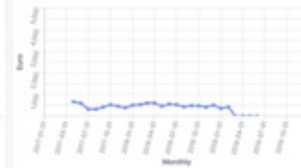
[voice] Total expenses

10,461.146  
Euro

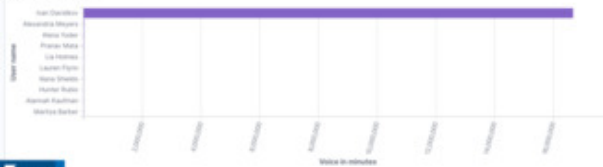
[voice] Records monthly



[voice] Expenses monthly



[voice] Top 10 Voice Users



[Overview](#) | [Voice](#) | [Data](#) | [Top 10](#)

Global Total records

376,182  
Total

Global Total expenses

51,532.277  
Euro

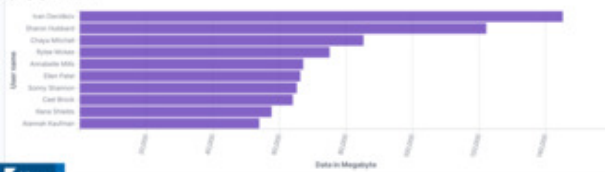
Global Records monthly



Global Expenses monthly

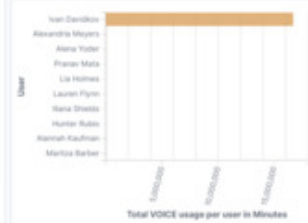
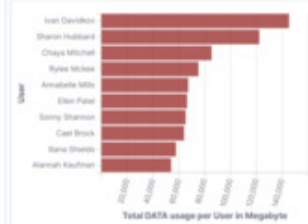
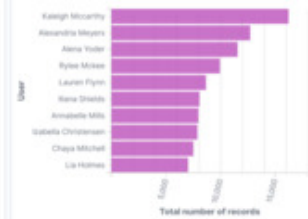
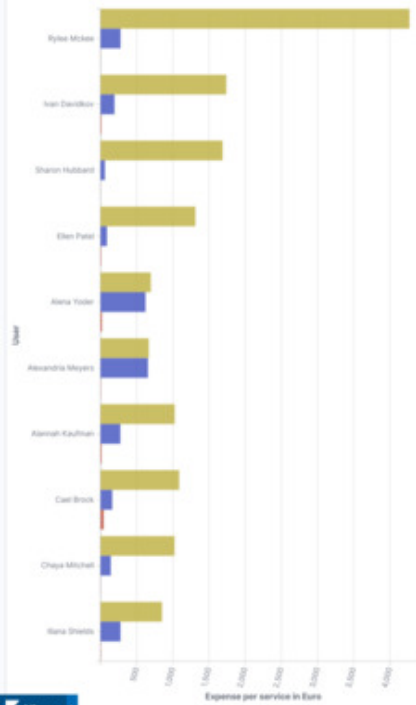
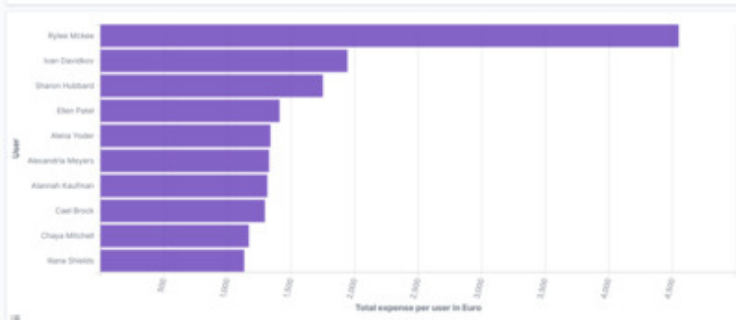


Global Top 10 Data user



Libra

[Overview](#) | [Voice](#) | [Data](#) | [Top 10](#)



**FOOD FOR THOUGHT**

# REAL TIME USERNAME

- [http\\_poller](#)
- [LDAPSearch](#)



# HEATMAPS

- geolocation

# SUBSCRIPTION

- add alerts
- add reports

**DEMO**