
Introduction to Bitergia Analytics Dashboard & Platform

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Outline

Overview of Bitergia Analytics
Dashboard

Main features & characteristics

Use cases

Example dashboard:

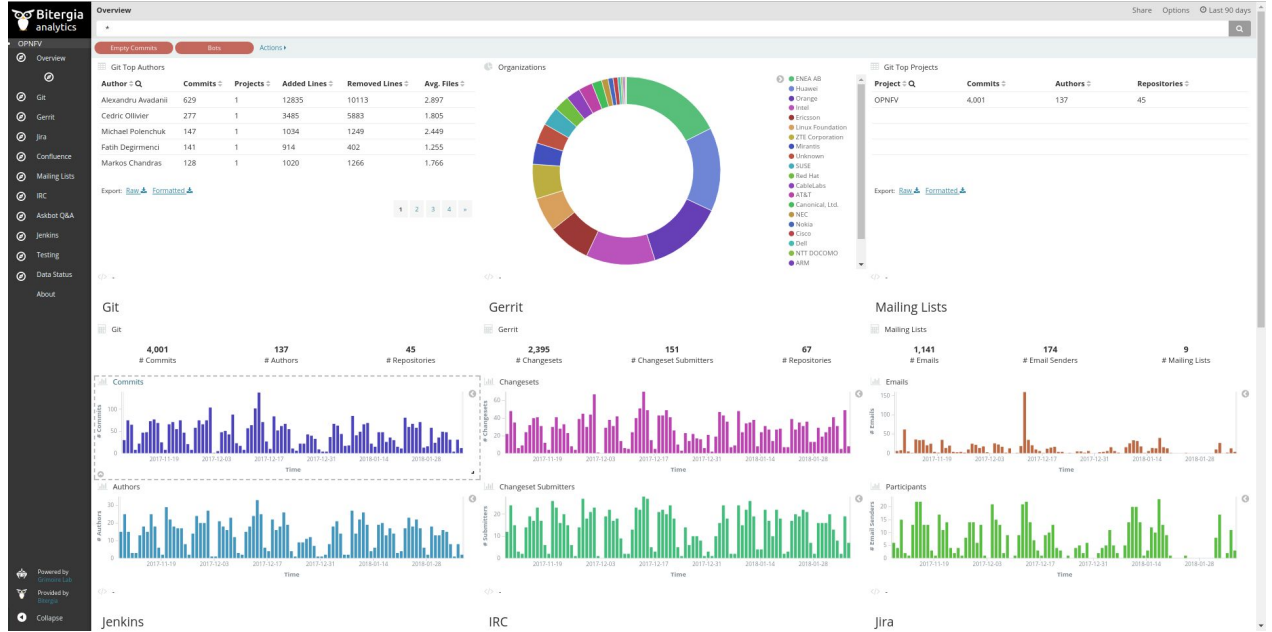
<http://opnfv.biterg.io>



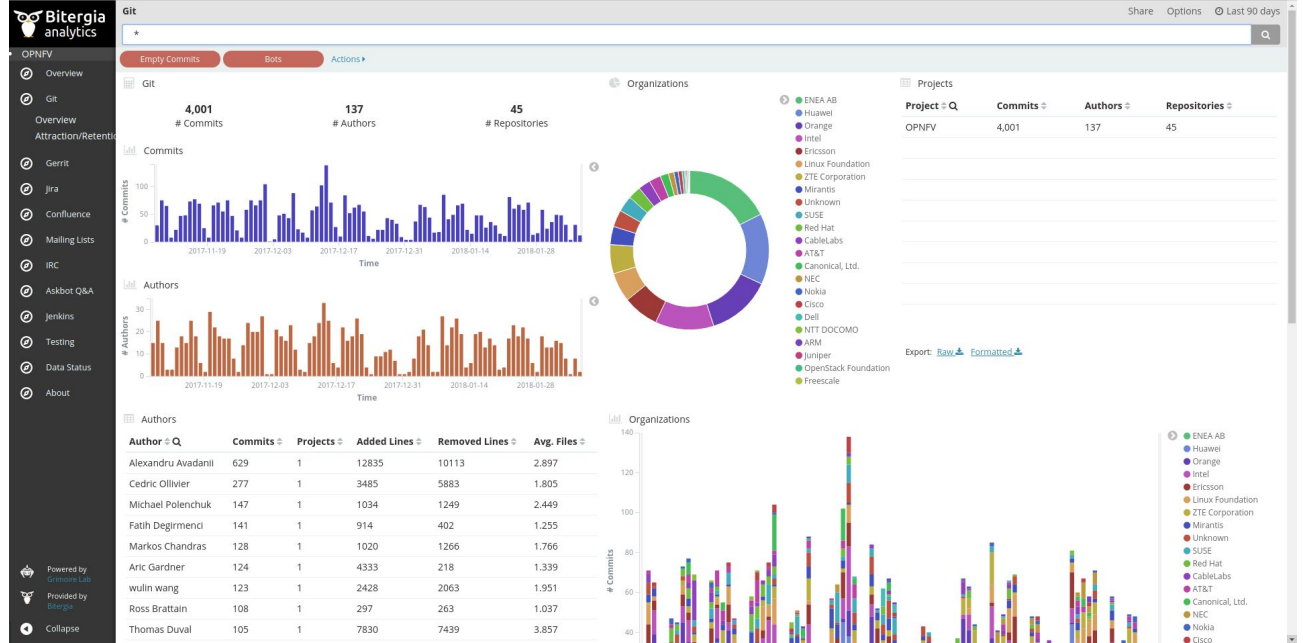
Overview of Bitergia Analytics Dashboard



Overview



Git



Review of the rest of panels

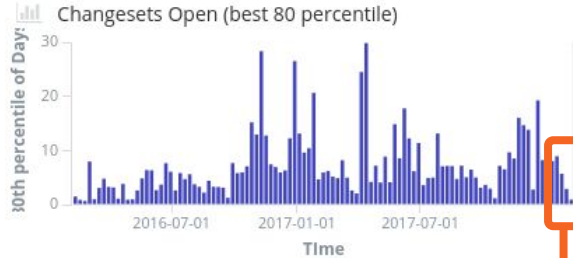
Timing Panels

How long does it take to close *things*? (issues, tickets, changesets, etc.)

Look for **peaks** in **median** and 80th percentile.

Review of the rest of panels

Timing Panels



Always a **decreasing trend at the right hand side**.

***Things* can't be open longer than the time from their creation to now.**

If **median** time to close is 50 days, this **decreasing trend** will begin 50 days ago, because *things* open from 49 days ago will be biased by the upper bound mentioned above.

Review of the rest of panels

Backlog Panels

Things that remain open (tickets, issues, changesets, etc.)

E.g. look for companies with more open things.

Review of the rest of panels

Backlog Vs. Timing Panels

Timing:

Do some companies have to wait longer to get their *things* approved/closed?

Timing + **Backlog**:

Do companies **with more open *things*** have to wait longer to get their *things* approved/closed?



Review of the rest of panels

Data Status

Information about **when** different sources were **last updated**.

Main Features

Architecture

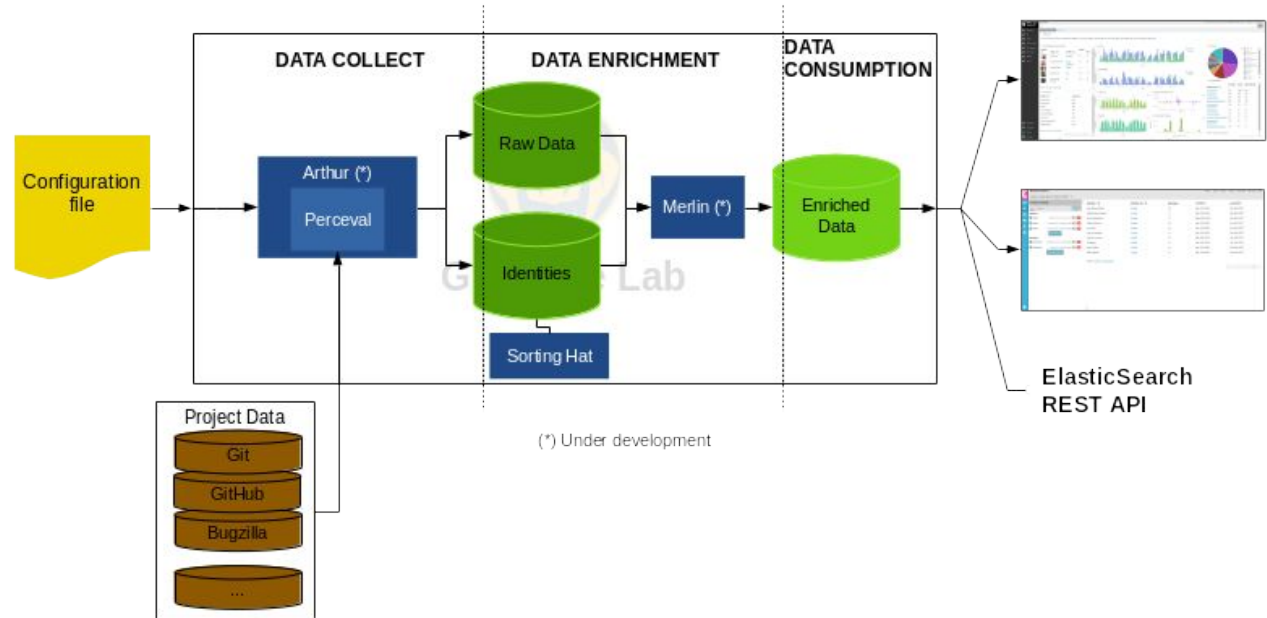
Some Features



Architecture



Grimoire Lab Architecture (draft)



Main Features

Drill down

Time frame filters

Sharing / embedding

Data export (CSV...)

API access

Allowed users can create
widgets and panels

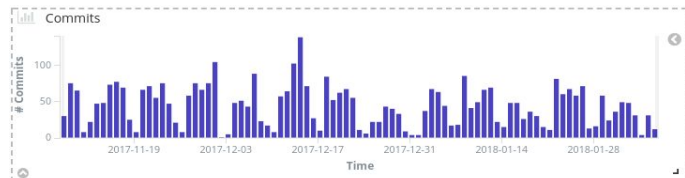
Data filters

Search box

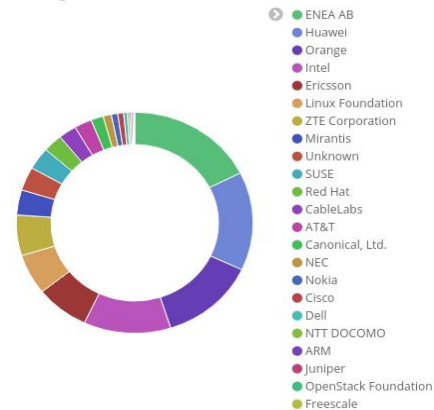
(ElasticSearch API)



Drill Down



Organizations



Repositories

| Repository | Commits | Authors | Organizations | Added Lines | Removed Lines | Avg. Lines/Commit | Avg. Files/Commit |
|---------------------------------|---------|---------|---------------|-------------|---------------|-------------------|-------------------|
| git://git.opnfv.org/opnfvdocs | 2,097 | 122 | 22 | 2126 | 2127 | 2.028 | 1.002 |
| git://git.opnfv.org/fuel | 304 | 7 | 3 | 7569 | 5992 | 44.609 | 4.217 |
| git://git.opnfv.org/releing | 195 | 36 | 16 | 4410 | 135207 | 715.985 | 5.379 |
| git://git.opnfv.org/funcstest | 190 | 12 | 9 | 5983 | 8552 | 76.5 | 3.068 |
| git://git.opnfv.org/moon | 151 | 9 | 3 | 16758 | 270835 | 1,904.589 | 18.728 |
| git://git.opnfv.org/pharos | 121 | 13 | 8 | 7495 | 1716 | 76.124 | 2.306 |
| git://git.opnfv.org/yardstick | 108 | 25 | 6 | 156659 | 3701 | 1,484.815 | 5.287 |
| git://git.opnfv.org/armband | 86 | 5 | 1 | 5779 | 4290 | 117.081 | 5.337 |
| git://git.opnfv.org/releing-xci | 83 | 8 | 6 | 2020 | 1340 | 40.482 | 3.169 |
| git://git.opnfv.org/compass4nfv | 72 | 7 | 4 | 4561 | 590 | 71.542 | 3.375 |

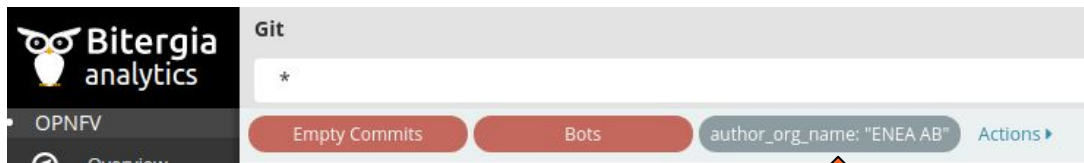
Export: [Raw](#) [Formatted](#)

1 2 3 4 5

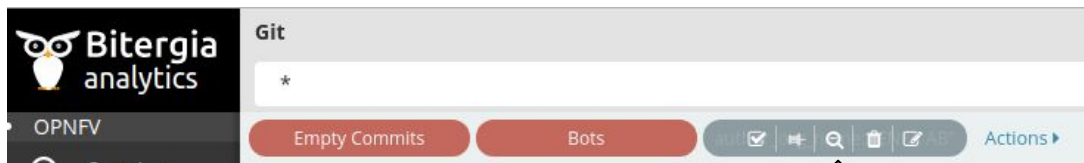


Drill Down (Filters)

When drilling down, a **filter** appears (field:value)



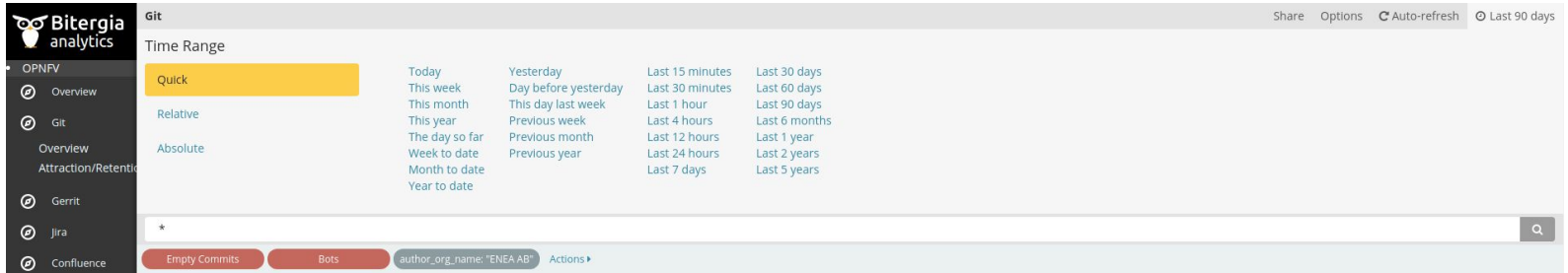
Mouse over: Enable/disable, pin/unpin, invert, remove, edit



Time Range Selection

Special filter: **Time Range** (top right corner)

Any time range of activity can be selected



The screenshot displays the Bitergia analytics interface. On the left is a dark sidebar with the Bitergia logo and a navigation menu including 'OPNFV', 'Overview', 'Git', 'Attraction/Retention', 'Gerrit', 'Jira', and 'Confluence'. The main content area is titled 'Git' and features a 'Time Range' dropdown menu. The 'Quick' option is selected and highlighted in yellow. Below it are 'Relative' and 'Absolute' categories. A search bar with a magnifying glass icon is located below the menu. At the bottom of the interface, there are several filter buttons: 'Empty Commits', 'Bots', 'author_org_name: "ENEAB"', and 'Actions'.

| Category | Time Range |
|----------|----------------------|
| Quick | Today |
| | This week |
| | This month |
| | This year |
| | The day so far |
| | Week to date |
| | Month to date |
| | Year to date |
| | Yesterday |
| | Day before yesterday |
| Relative | Last 15 minutes |
| | Last 30 minutes |
| | Last 1 hour |
| | Last 4 hours |
| | Last 12 hours |
| | Last 24 hours |
| | Last 7 days |
| | Last 30 days |
| | Last 60 days |
| | Last 90 days |
| Absolute | Last 6 months |
| | Last 1 year |
| | Last 2 years |
| | Last 5 years |
| | Last 90 days |



Search Box

General search box for filtering purposes:

- Look for specific field matches:
 - `author_name:"Cedric Ollivier"`
- Look for keywords:
 - `Cedric Ollivier` => Either Juan or Hernandez across all fields

The screenshot shows the Git search interface. At the top, the search query is `author_name:"Cedric Ollivier"`. Below the search bar, there are three filter buttons: "Empty Commits", "Bots", and "Actions". The main content area displays search results for "Git" with the following statistics:

| Category | Count |
|----------------|-------|
| # Commits | 277 |
| # Authors | 1 |
| # Repositories | 12 |

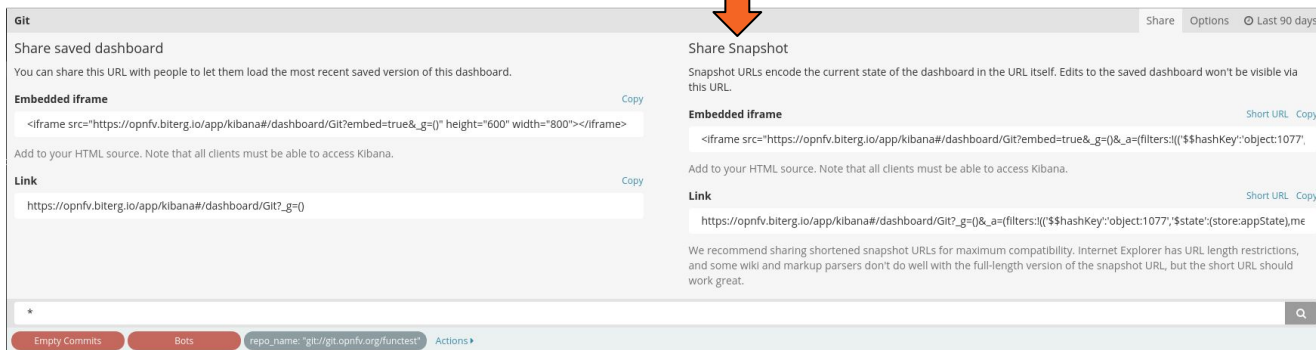
Additional elements include "Organizations" (Orange), "Proj", and "OPN" on the right side. A "Commits" section is visible at the bottom left.



Sharing / Embedding

We can share / embed panels at any moment

Eg: share with a team the data for a given repository during the last year



Git

Share saved dashboard

You can share this URL with people to let them load the most recent saved version of this dashboard.

Embedded iframe [Copy](#)

```
<iframe src="https://opnfv.biterg.io/app/kibana#/dashboard/Git?embed=true&g=0" height="600" width="800"></iframe>
```

Add to your HTML source. Note that all clients must be able to access Kibana.

Link [Copy](#)

```
https://opnfv.biterg.io/app/kibana#/dashboard/Git?_g=0
```

Share Snapshot

Snapshot URLs encode the current state of the dashboard in the URL itself. Edits to the saved dashboard won't be visible via this URL.

Embedded iframe [Short URL](#) [Copy](#)

```
<iframe src="https://opnfv.biterg.io/app/kibana#/dashboard/Git?embed=true&g=0&a=(filters:!({$hashKey:'object:1077',
```

Add to your HTML source. Note that all clients must be able to access Kibana.

Link [Short URL](#) [Copy](#)

```
https://opnfv.biterg.io/app/kibana#/dashboard/Git?_g=0&a=(filters:!({$hashKey:'object:1077',$state:(store:app$state),me
```

We recommend sharing shortened snapshot URLs for maximum compatibility. Internet Explorer has URL length restrictions, and some wiki and markup parsers don't do well with the full-length version of the snapshot URL, but the short URL should work great.

Empty Commits Bots repo_name: "git://git.opnfv.org/funcitest" Actions



Sharing / Embedding

We can share / embed panels at any moment

Eg: share dashboard as it was saved



Git Share Options Last 90 days

Share saved dashboard

You can share this URL with people to let them load the most recent saved version of this dashboard.

Embedded iframe Copy

```
<iframe src="https://opnfv.biterg.io/app/kibana#/dashboard/Git?embed=true&g=()" height="600" width="800"></iframe>
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Link Short URL Copy

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https://opnfv.biterg.io/app/kibana#/dashboard/Git?_g=()&a=(filters:!({$hashKey:'object:1077',$state:{store:appState},me
```

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* Q

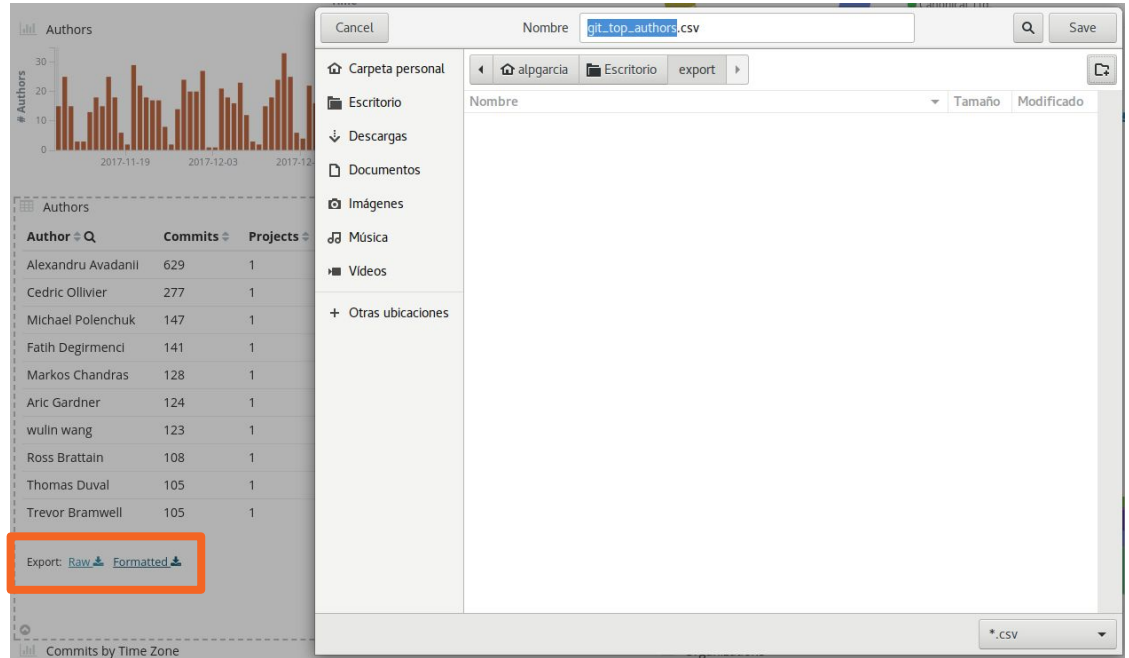
Empty Commits Bots repo_name: git X Actions



Data Export

Data in tables can be exported

Time Frame & Filters
will be applied



The screenshot shows a data export interface. On the left, a table lists authors with their commit counts and project counts. An orange arrow points to the 'Export' button, which has 'Raw' and 'Formatted' options. On the right, a file save dialog is open, showing the filename 'git_top_authors.csv' and a file explorer view.

| Author | Commits | Projects |
|--------------------|---------|----------|
| Alexandru Avadanii | 629 | 1 |
| Cedric Ollivier | 277 | 1 |
| Michael Polenchuk | 147 | 1 |
| Fatih Degirmenci | 141 | 1 |
| Markos Chandras | 128 | 1 |
| Aric Gardner | 124 | 1 |
| wulin wang | 123 | 1 |
| Ross Brattain | 108 | 1 |
| Thomas Duval | 105 | 1 |
| Trevor Bramwell | 105 | 1 |



Data Validation

Since we can filter activity:

- We can work at the level of developer or repository
- This helps to find inconsistencies in the data
 - List of commits, changesets, repositories by a developer
 - Affiliations, unique identities
 - Checking of oddities in the data, such as peaks

Aggregation of Data

Since Kibana allows for new features

- drill down, time range filter, creation of own widgets and others

We can **aggregate all information in a single dashboard**

- So we can **later share or filter per project of interest**

Creation of Widgets and Panels

When allowed:

- Edit widgets
- Create new ones
- Build own panels



Visualize / Step / 1

Create New Visualization

Area chart
Great for stacked timelines in which the total of all series is more important than comparing any two or more series. Less useful for assessing the relative change of unrelated data points as changes in a series lower down the stack will have a difficult to gauge effect on the series above it.

Data table
The data table provides a detailed breakdown, in tabular format, of the results of a composed aggregation. Tip, a data table is available from many other charts by clicking the grey bar at the bottom of the chart.

Line chart
Often the best chart for high density time series. Great for comparing one series to another. Be careful with sparse sets as the connection between points can be misleading.

Markdown widget
Useful for displaying explanations or instructions for dashboards.

API Access

ElasticSearch documentation:

<https://www.elastic.co/guide/en/elasticsearch/reference/current/docs-get.html>

Example:

```
curl -XGET 'https://elasticsearch_instance:443/project/git/_search/'
```

Other tools can be used for viz instead of Kibana



Final remarks

Final remarks

We're still shaping the product: you can take advantage of that

The system is quite flexible
Feedback is welcome!