GRAPHISTRY

Interactive Guide

Graphistry UI Guide

I. Overview & Basic Interactions

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b. Toolbar Overview
c. Zooming
d. Visualization Interaction
e. Clustering
f. Scene Settings
g. Entity Selection & Moving

II. Histogram Panel & Data Brush

a. Creating a New Histogram
b. Applying a Color Profile
c. Filtering With a Histogram
d. Using the Data Brush

III. Filters & Exclusions

a. Using Filters
b. Using Exclusions

IV. References & Documentation

a. Workbooks
b. API References
c. Tutorial & Demo Notebooks

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Overview & Basic Interactions

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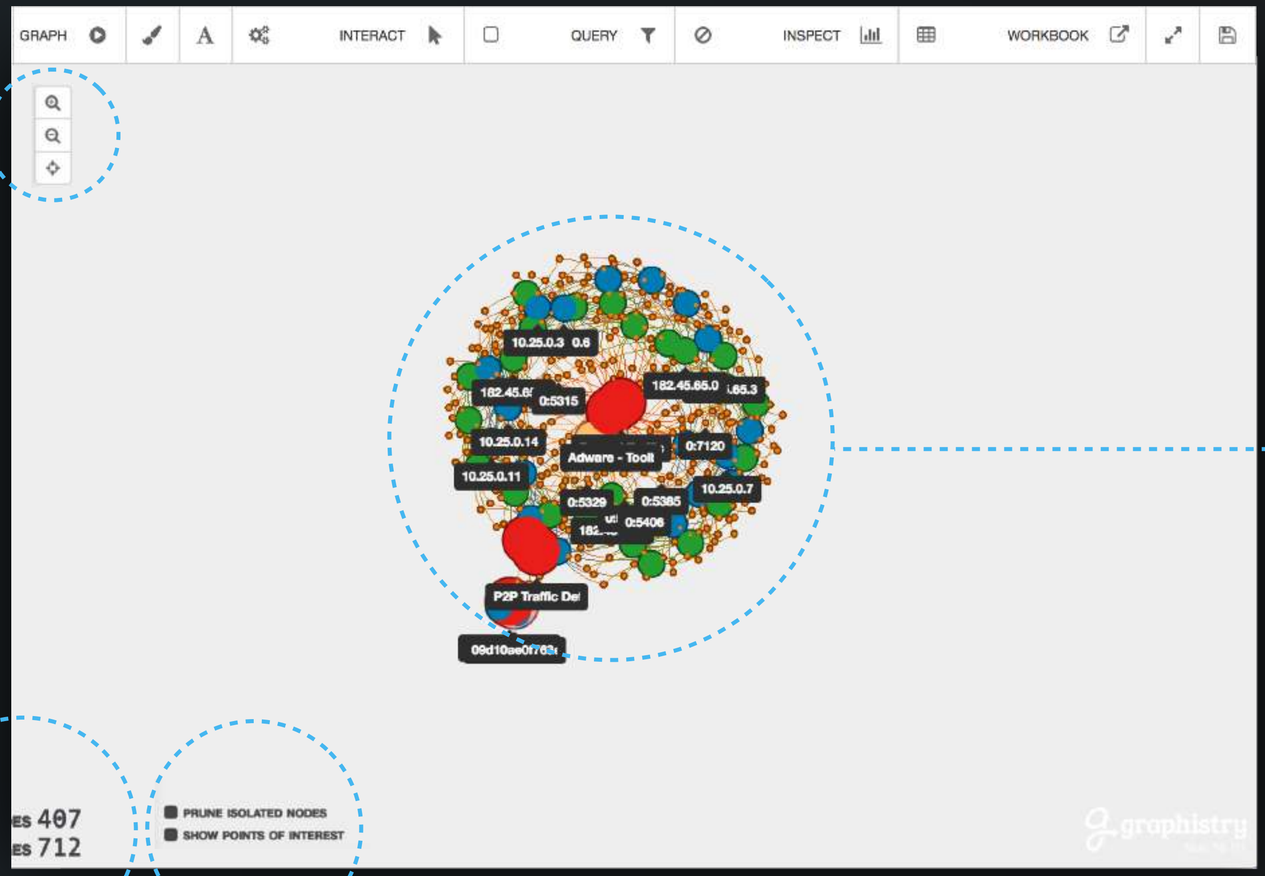
UI Overview

Toolbar



Zoom controls

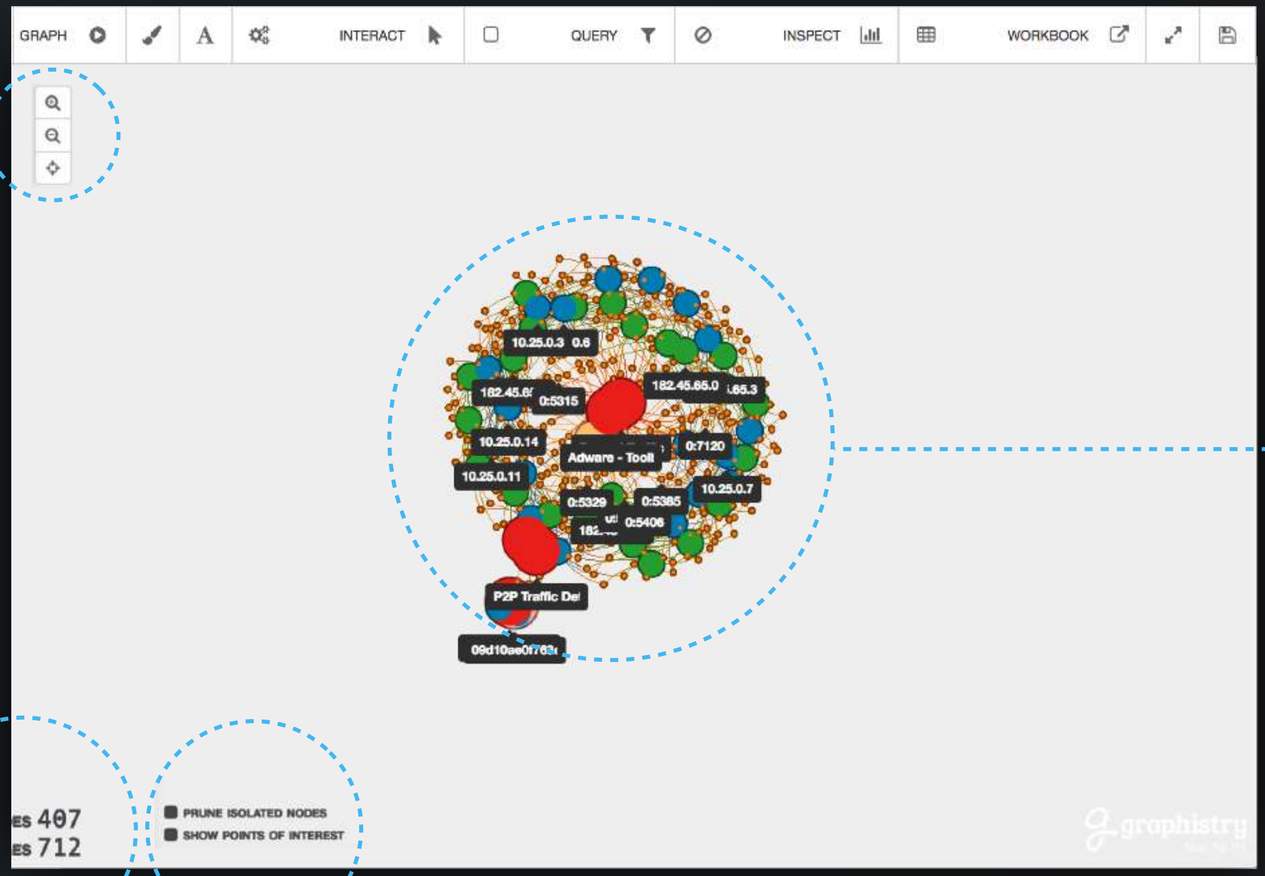
Graph Vis.

Node / Edge Count

Quick Toggles

UI Overview

Toolbar



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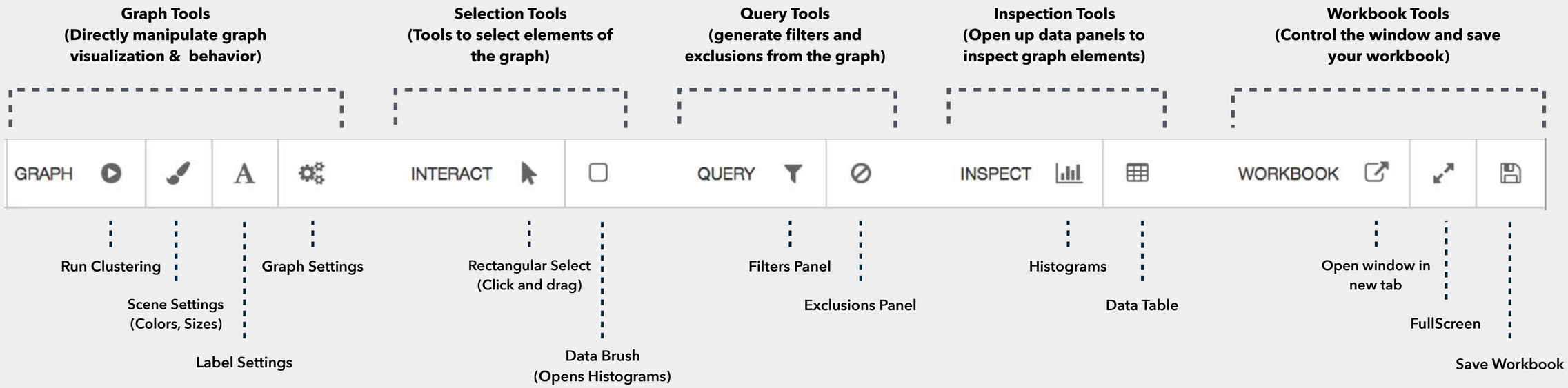

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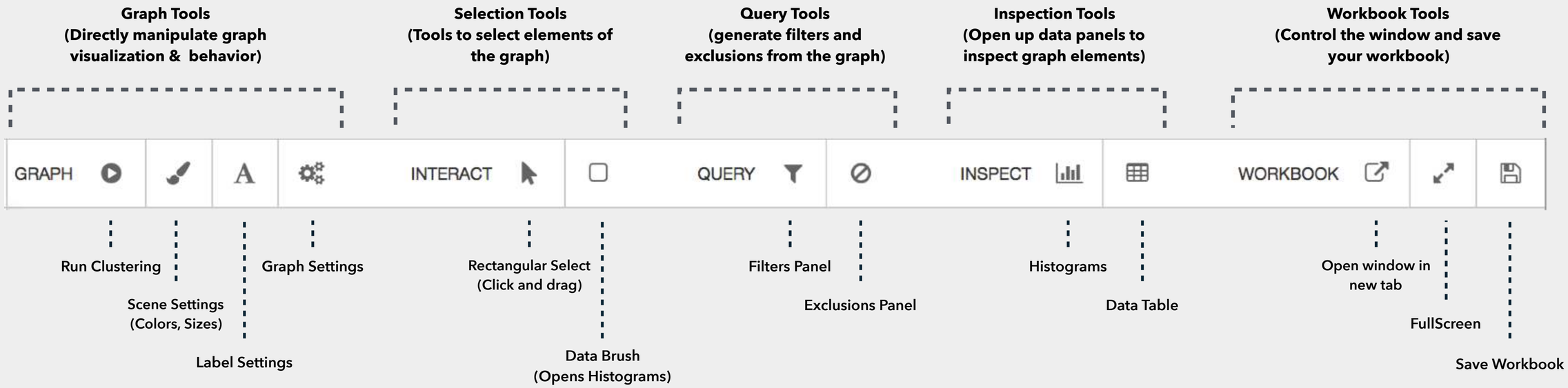

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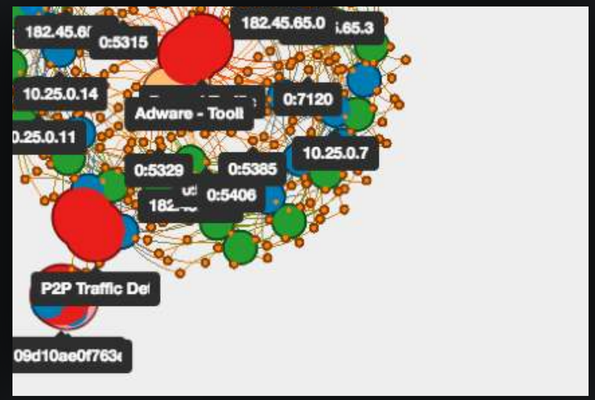

Zoom in & out using…

- Toolbar + - buttons
- Mouse scroll wheel
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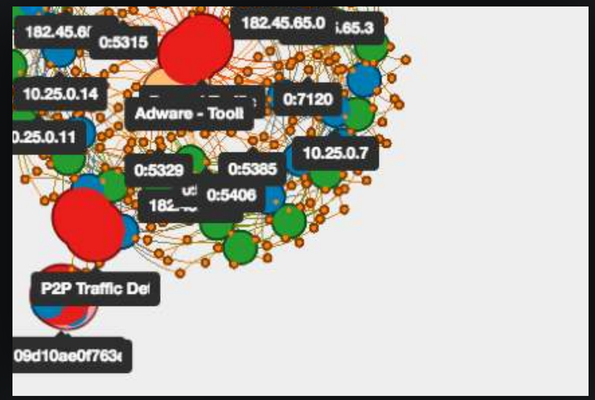

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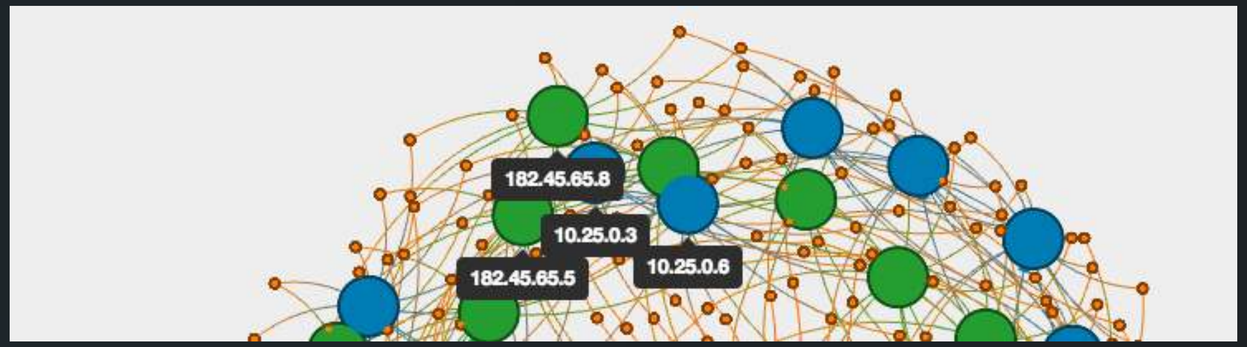
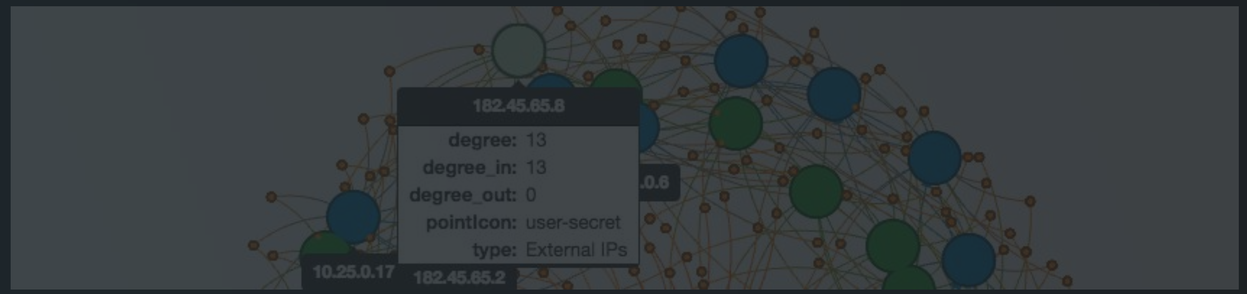
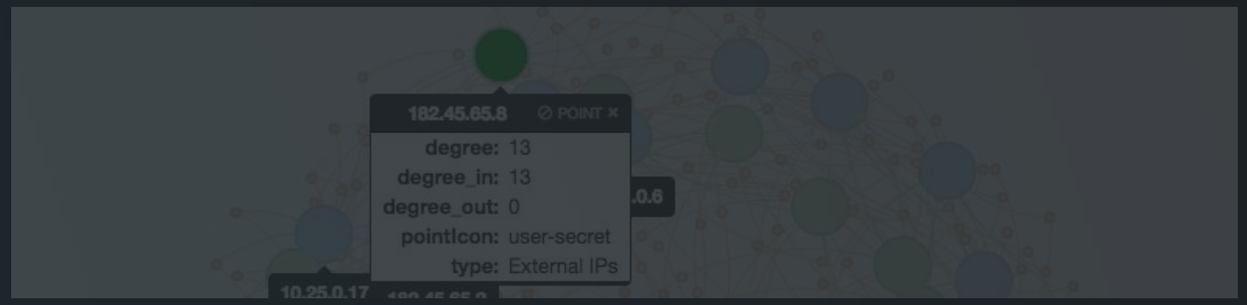
Graph Visualization Interaction



Points of Interest are shown when you load the graph.



Hover over a node or edge to see its label, a detailed description of its attributes.



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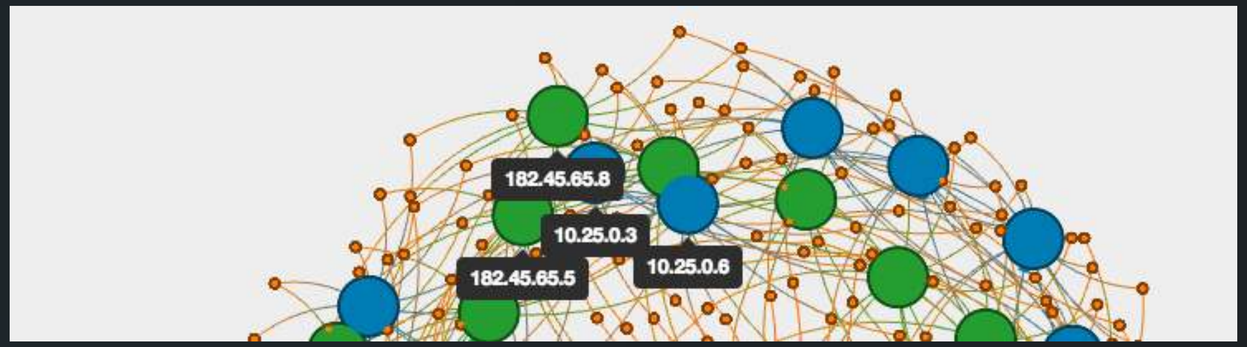

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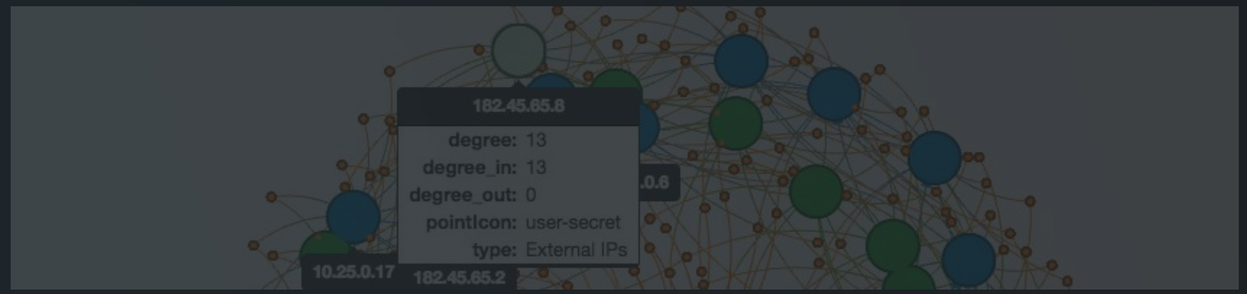

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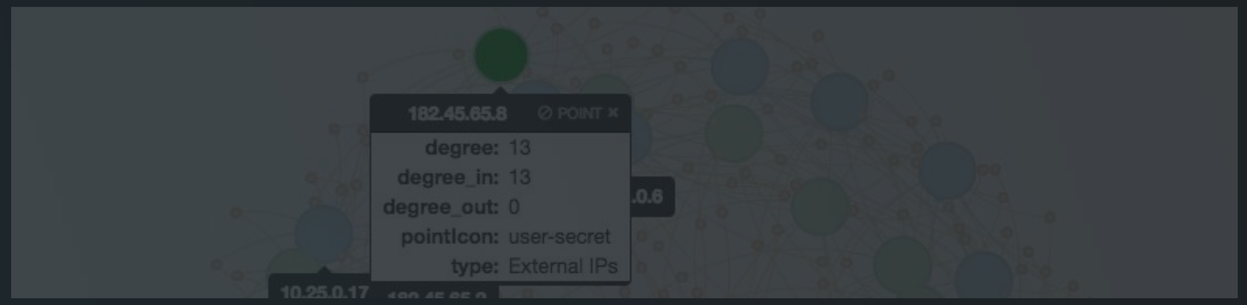

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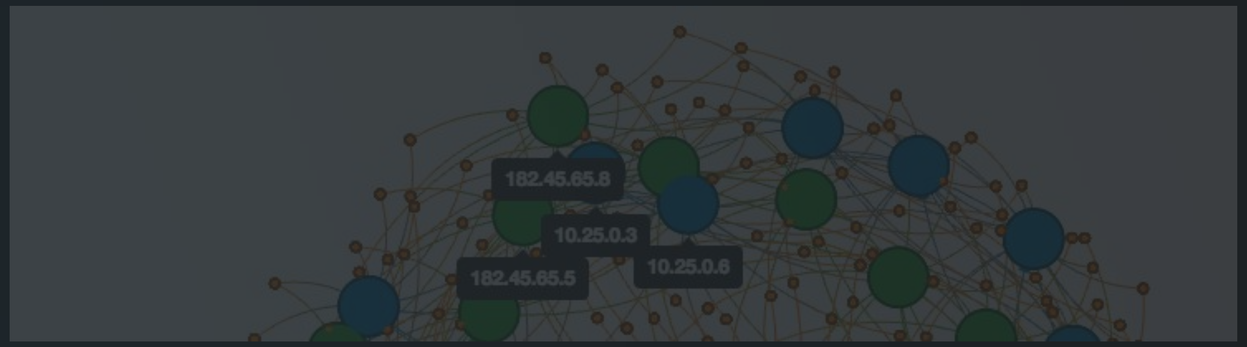

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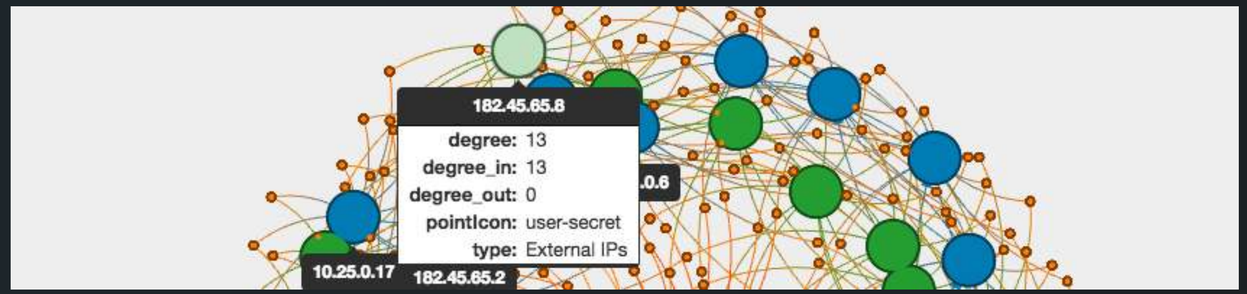

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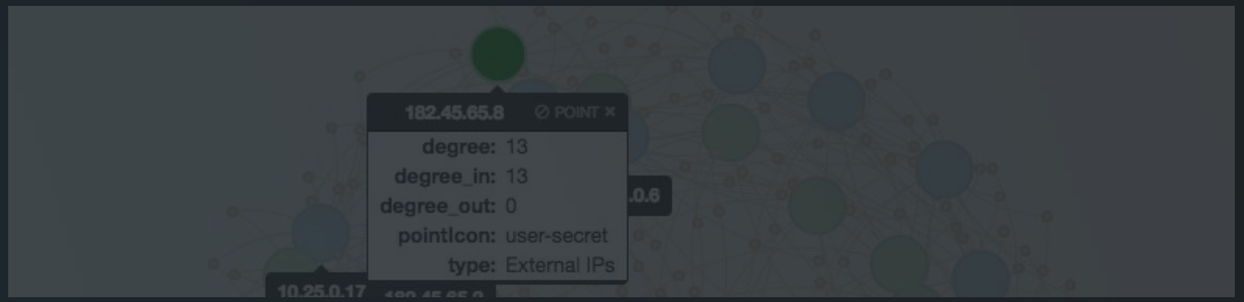

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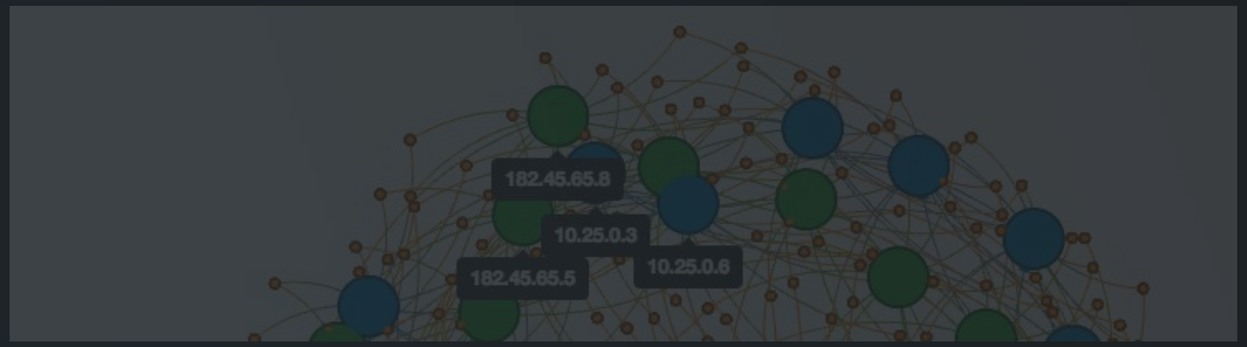

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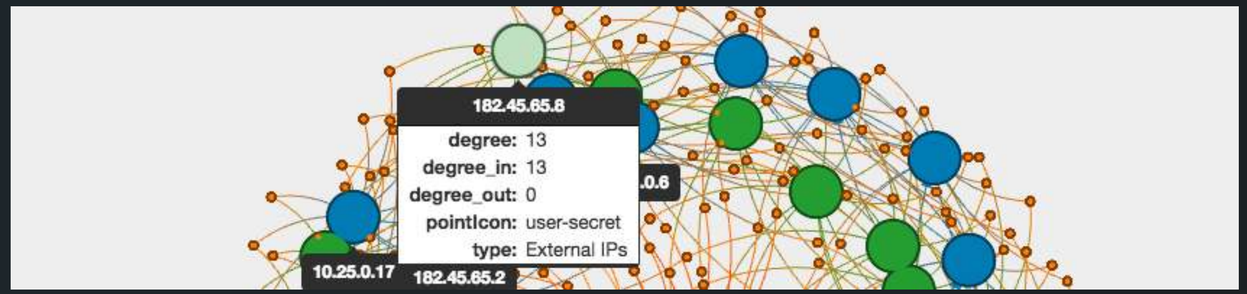

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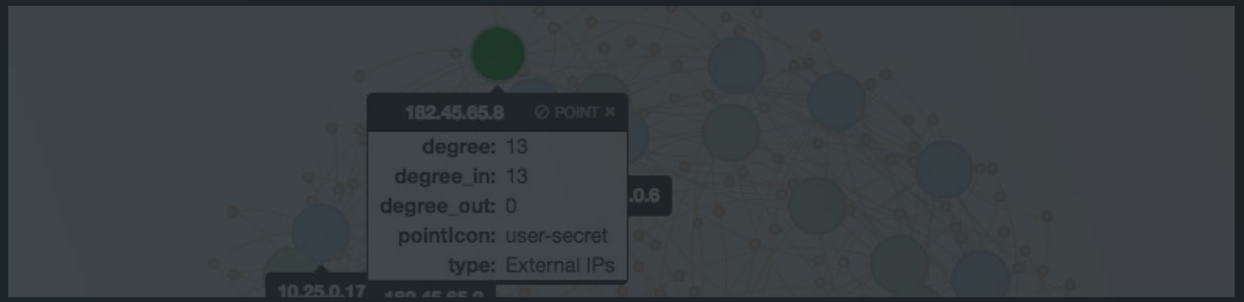

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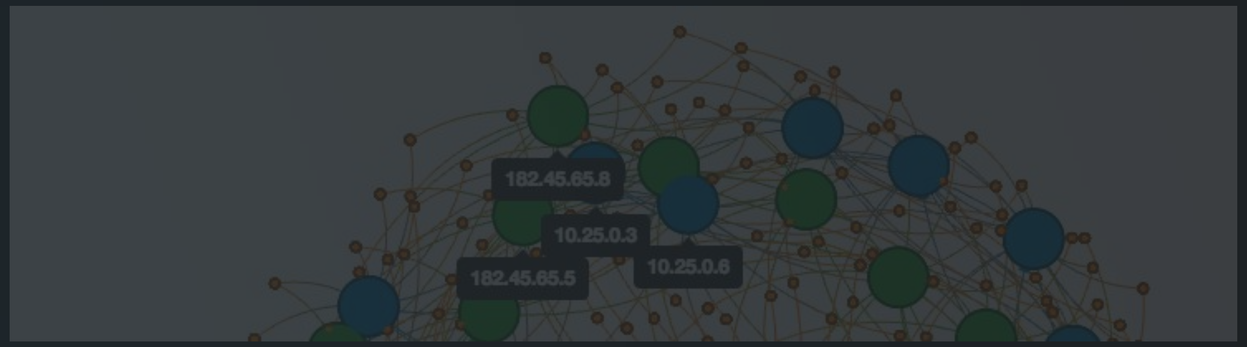

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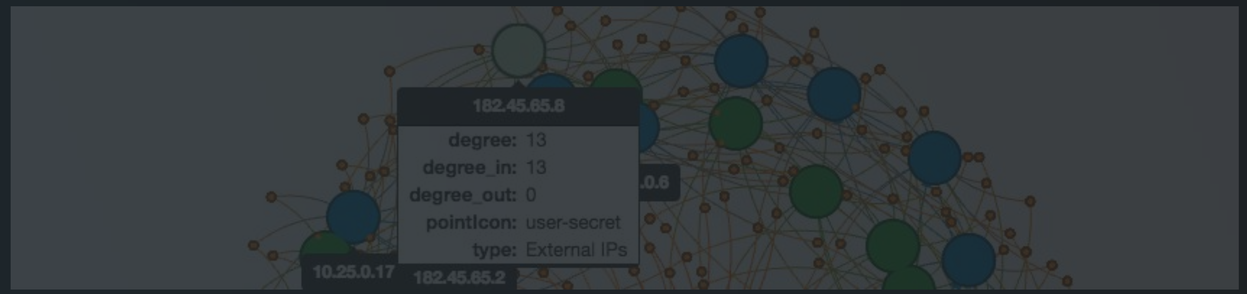

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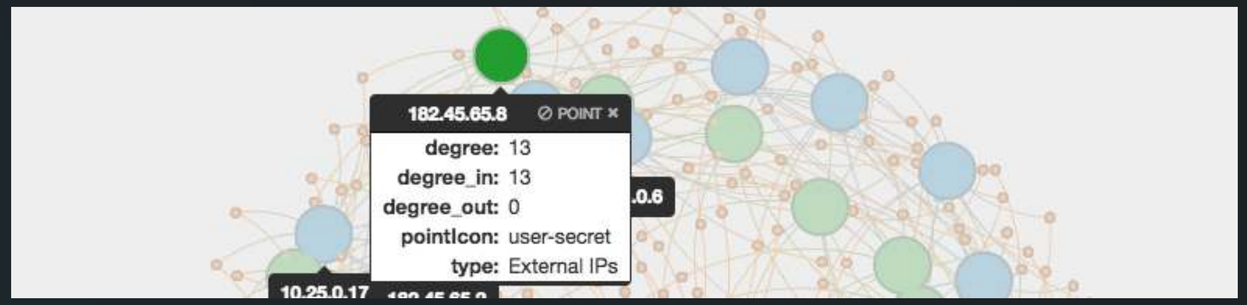

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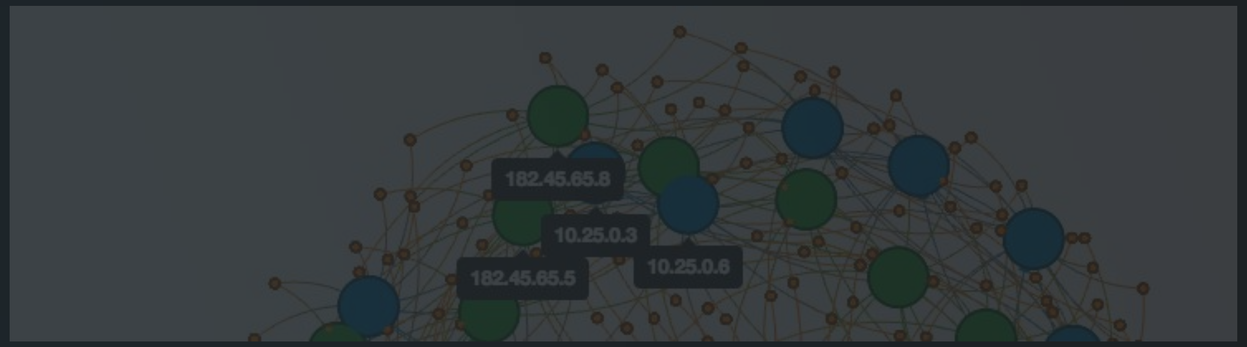

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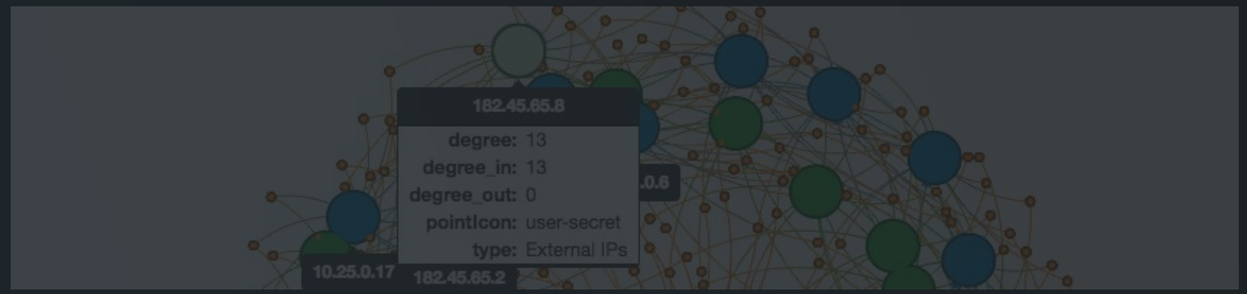

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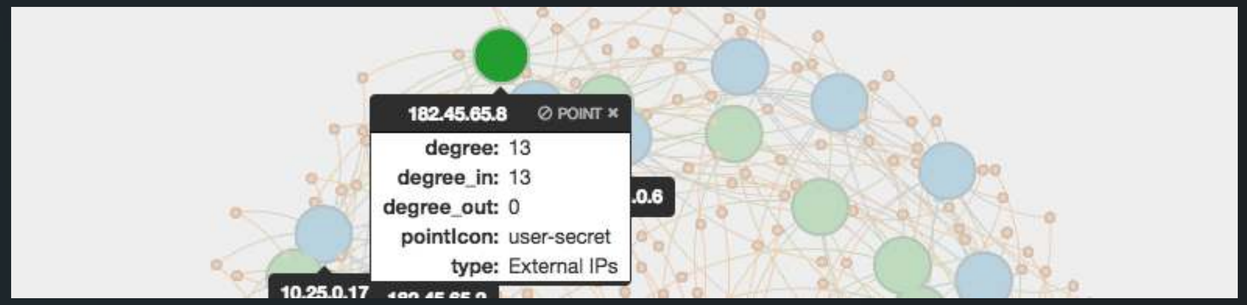

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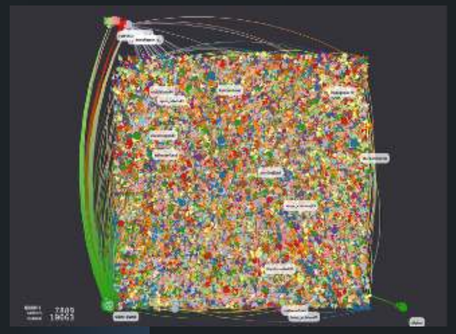

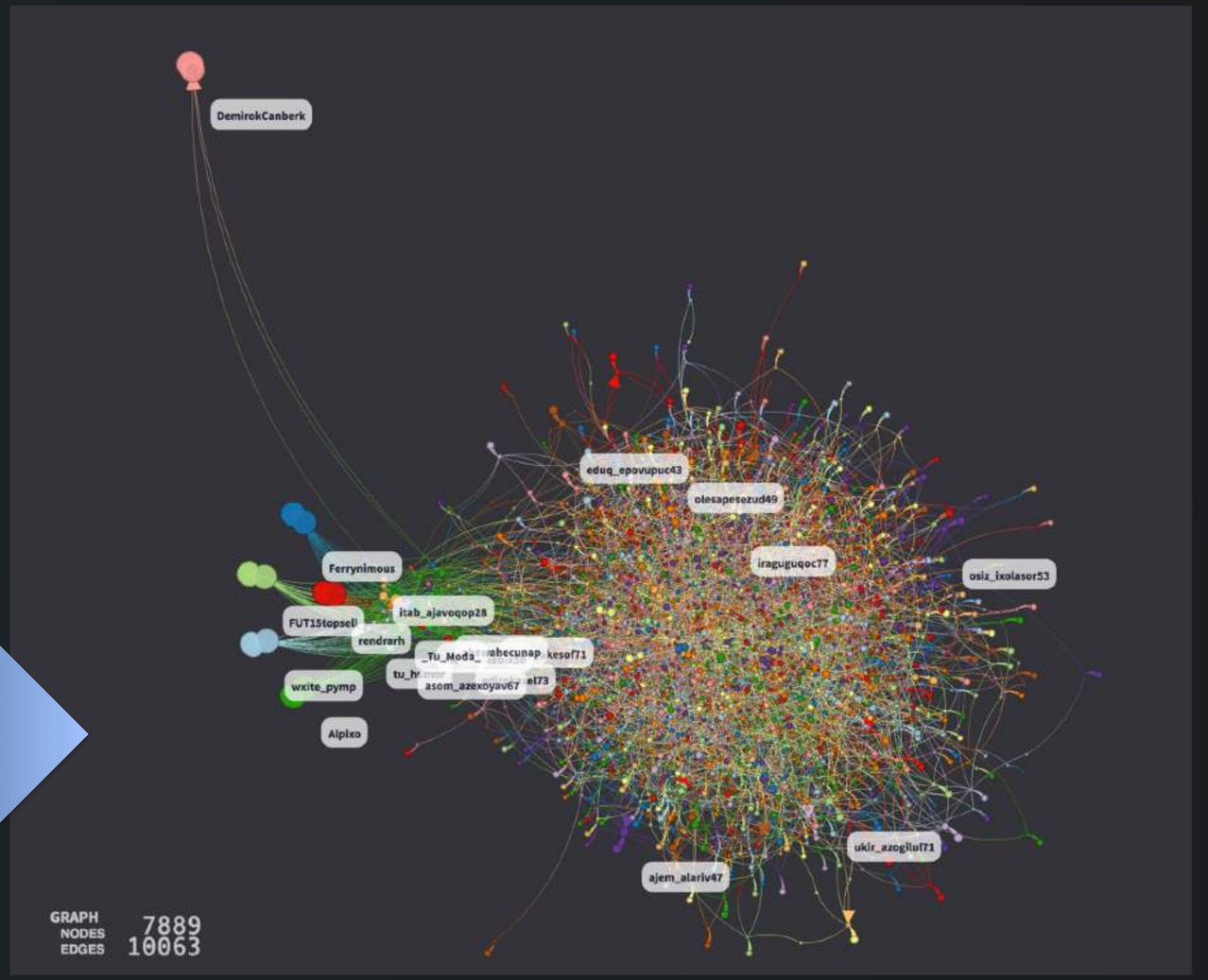

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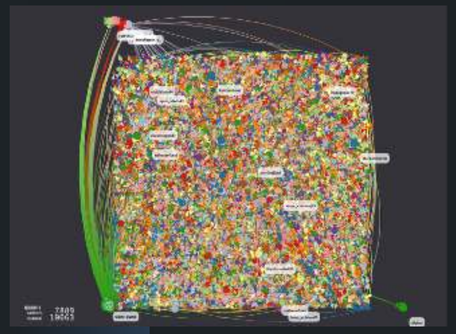
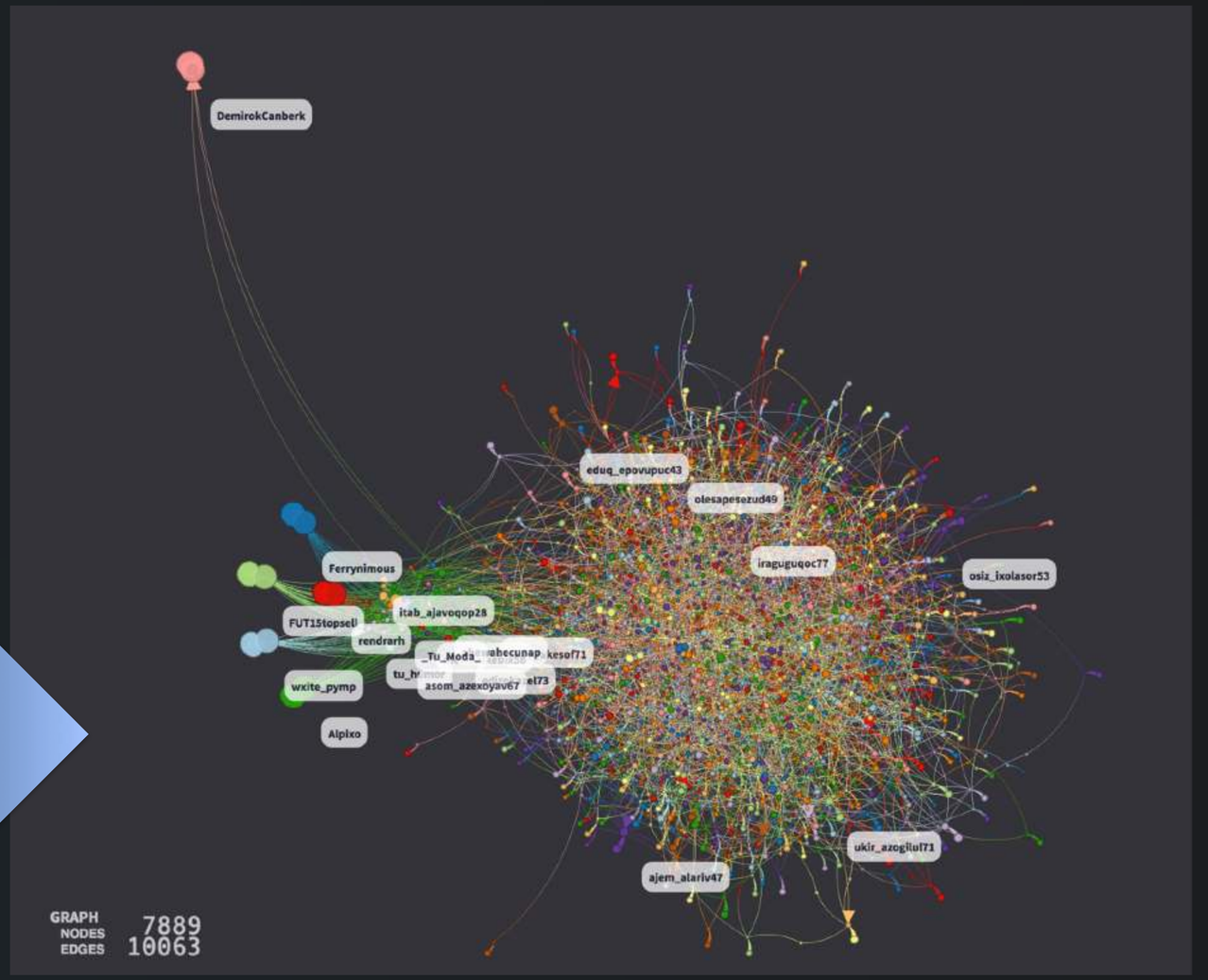
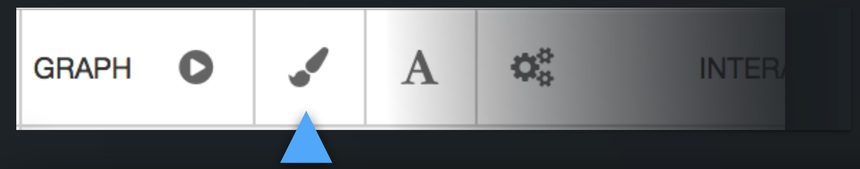
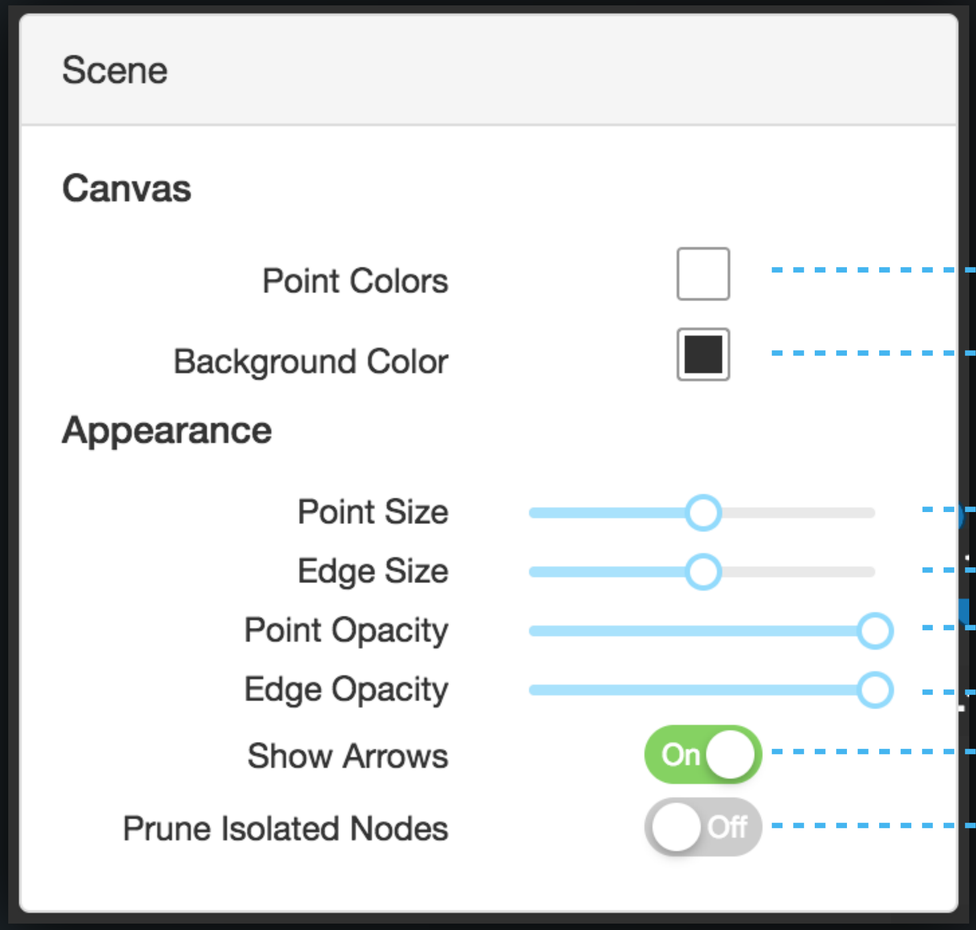




Scene Settings





Change all node colors

Change background color

Scale Nodes

Scale Edges

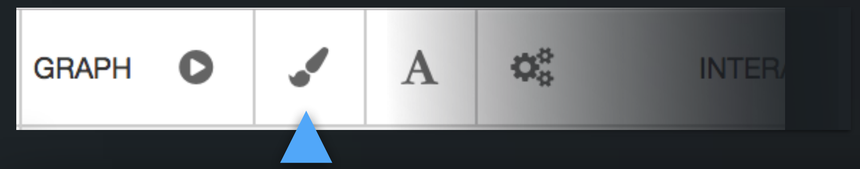
Node Opacity %

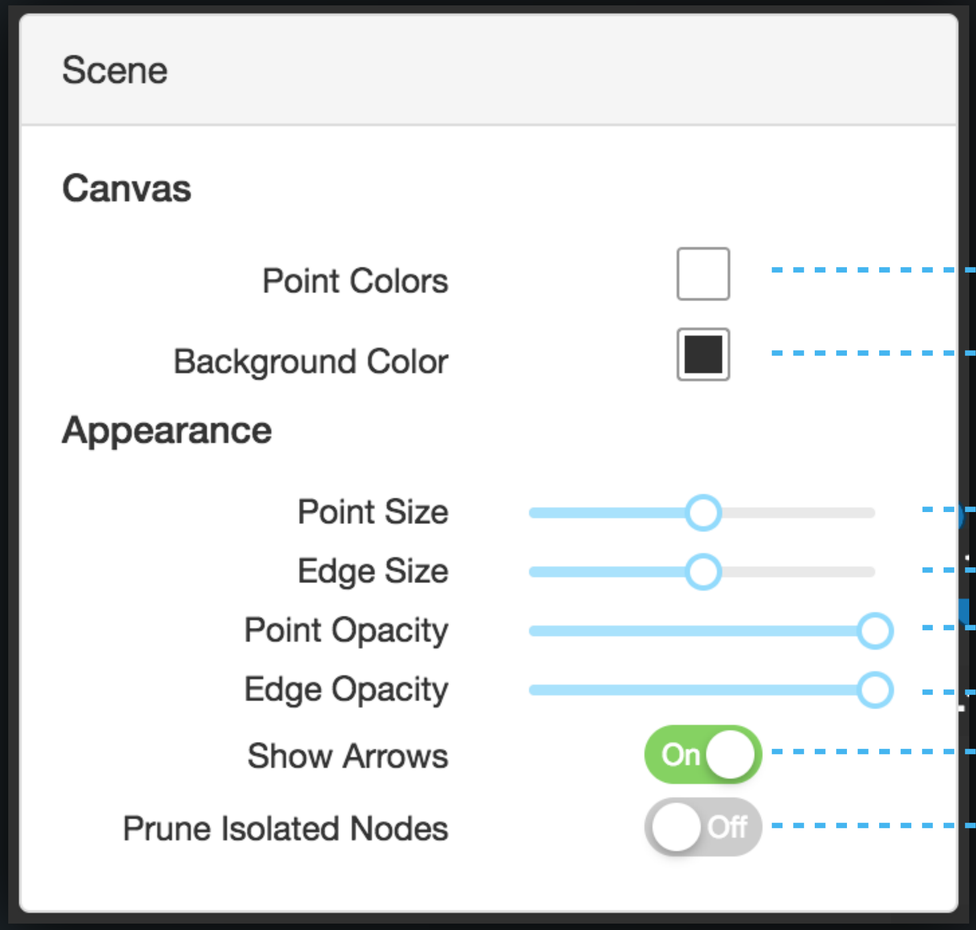
Edge Opacity %

Show Edge Arrows

Prune Isolated Nodes

Scene Settings





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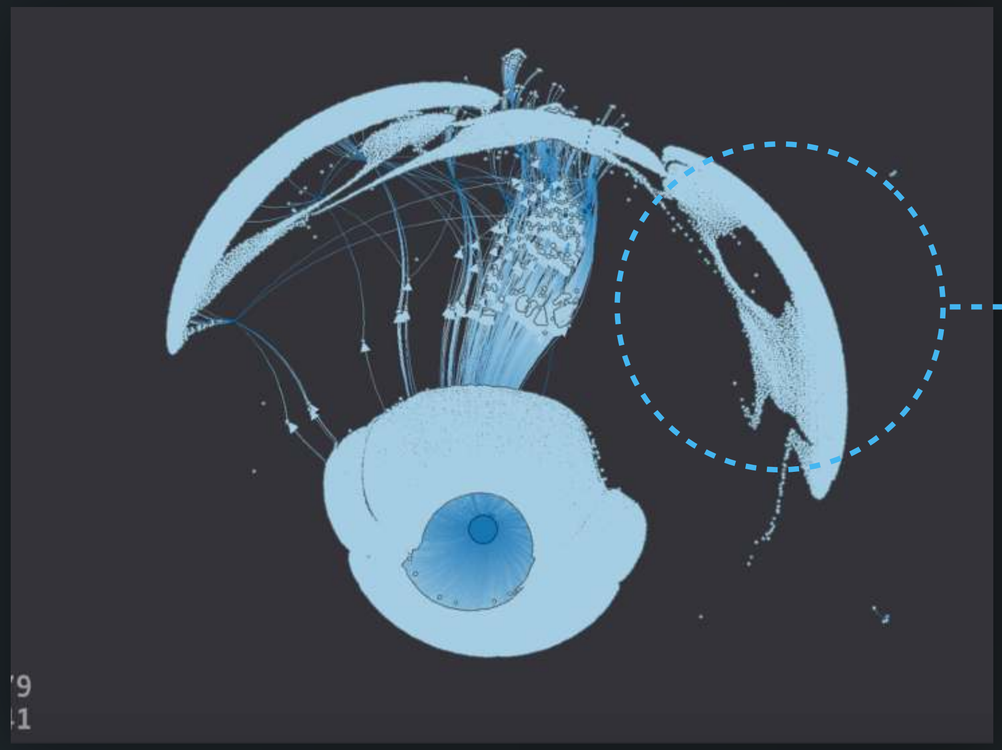

These nodes are disconnected from our graph,so we might want to exclude them.

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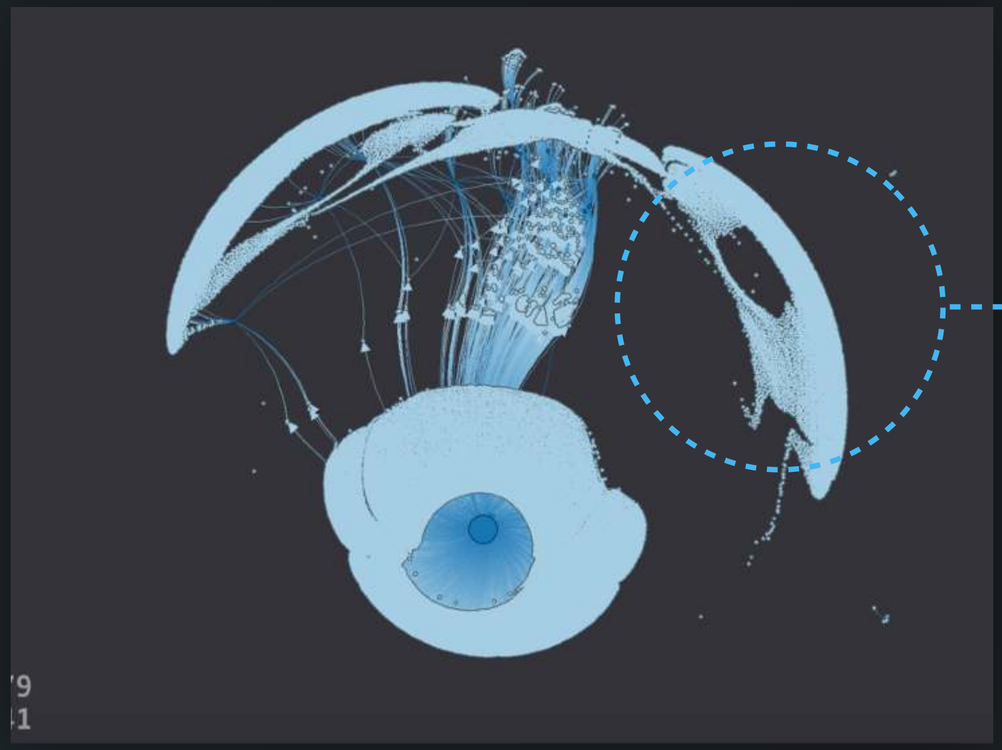

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Prune Isolated Nodes

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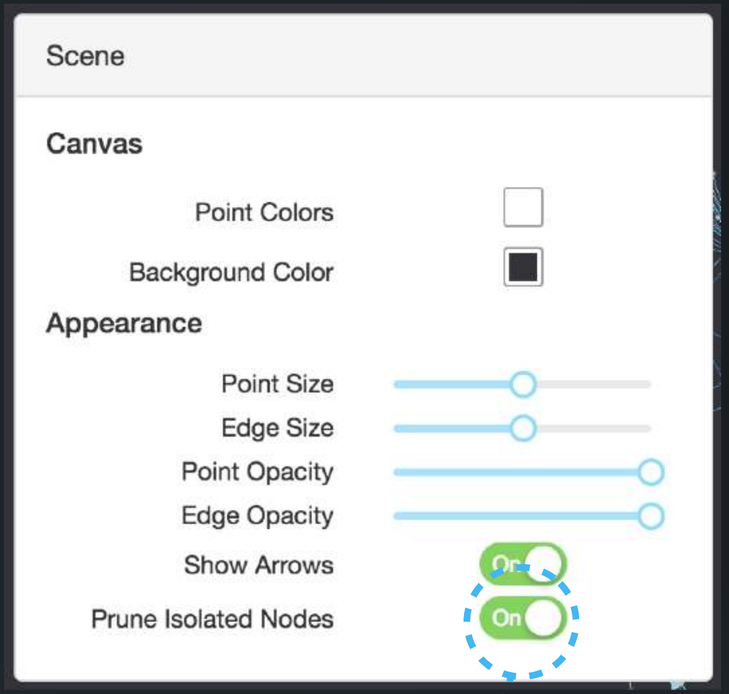
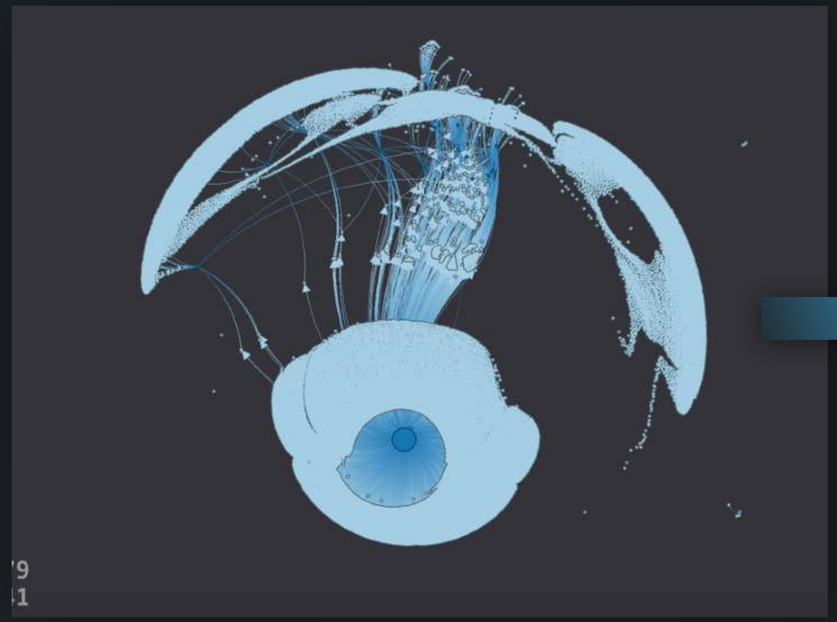
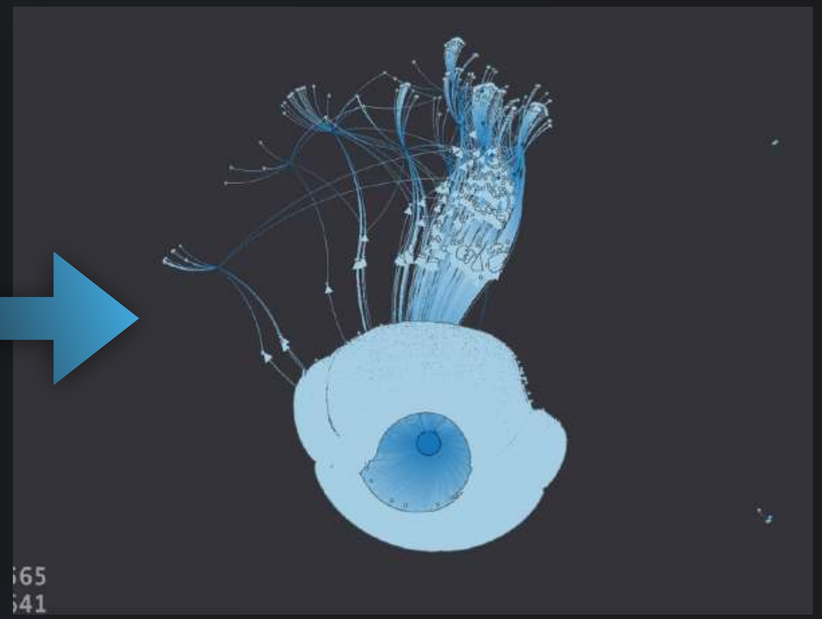
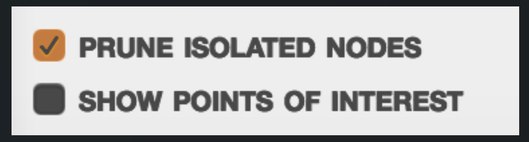






Turn Prune Isolated Nodes On

OR



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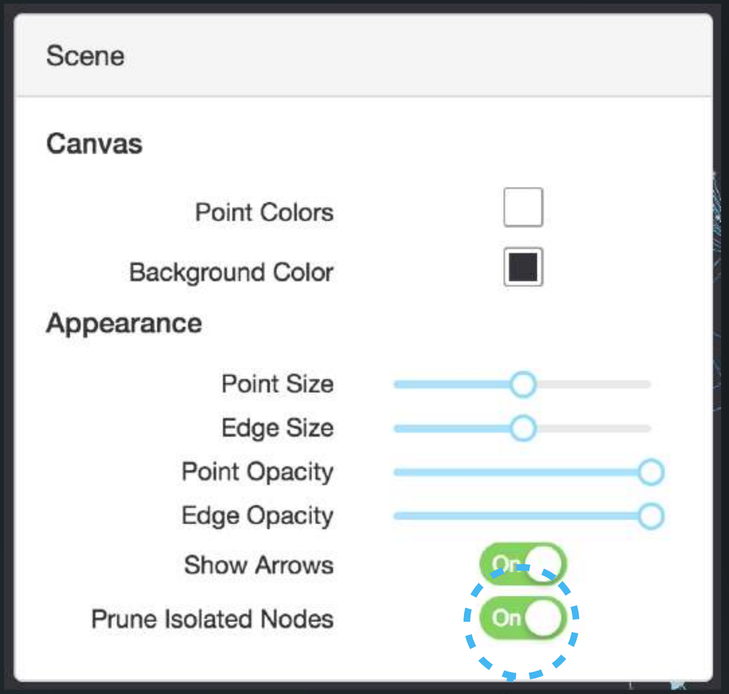

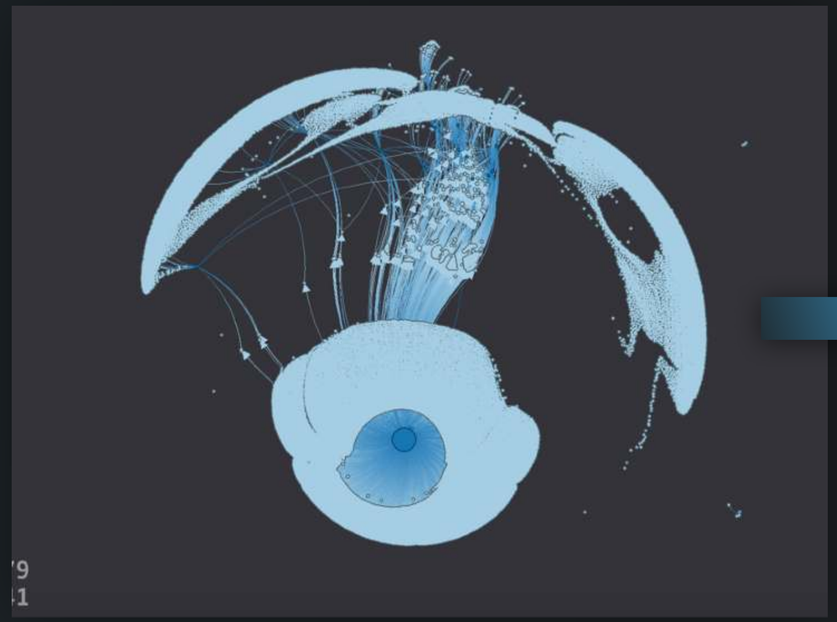

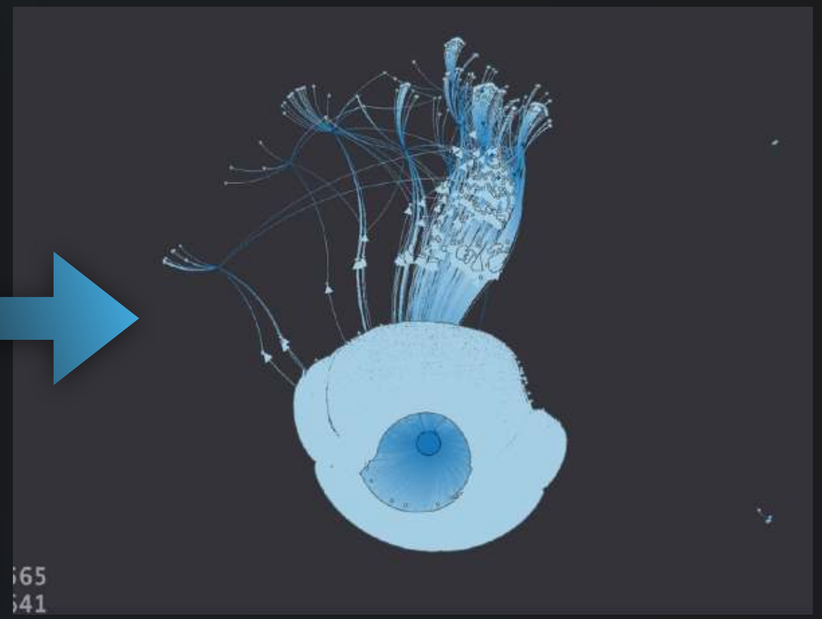

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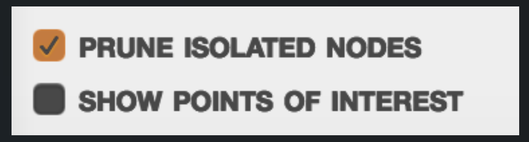

Move An Individual Node

To move a node:

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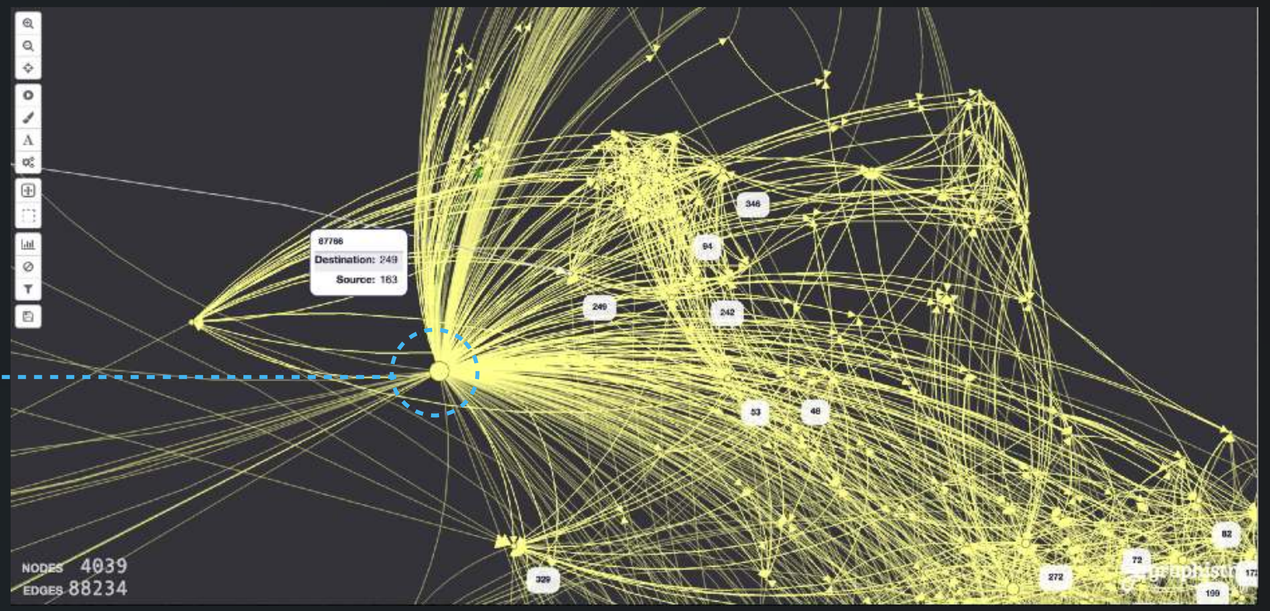
2. **Drag and drop to new location**

Click to select



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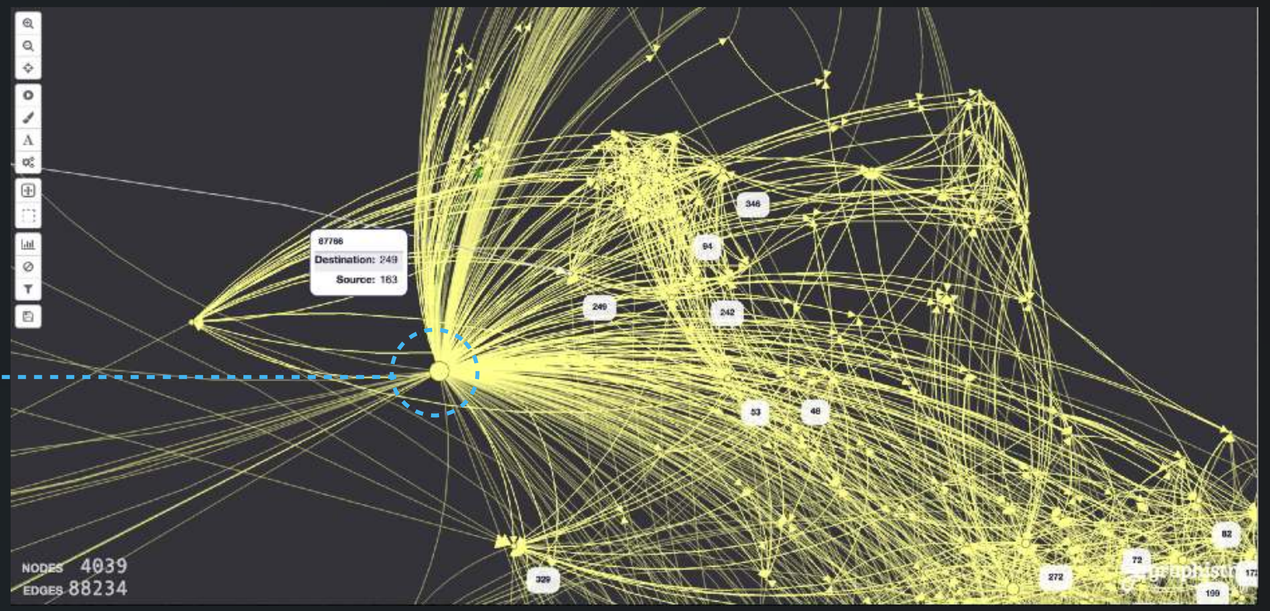

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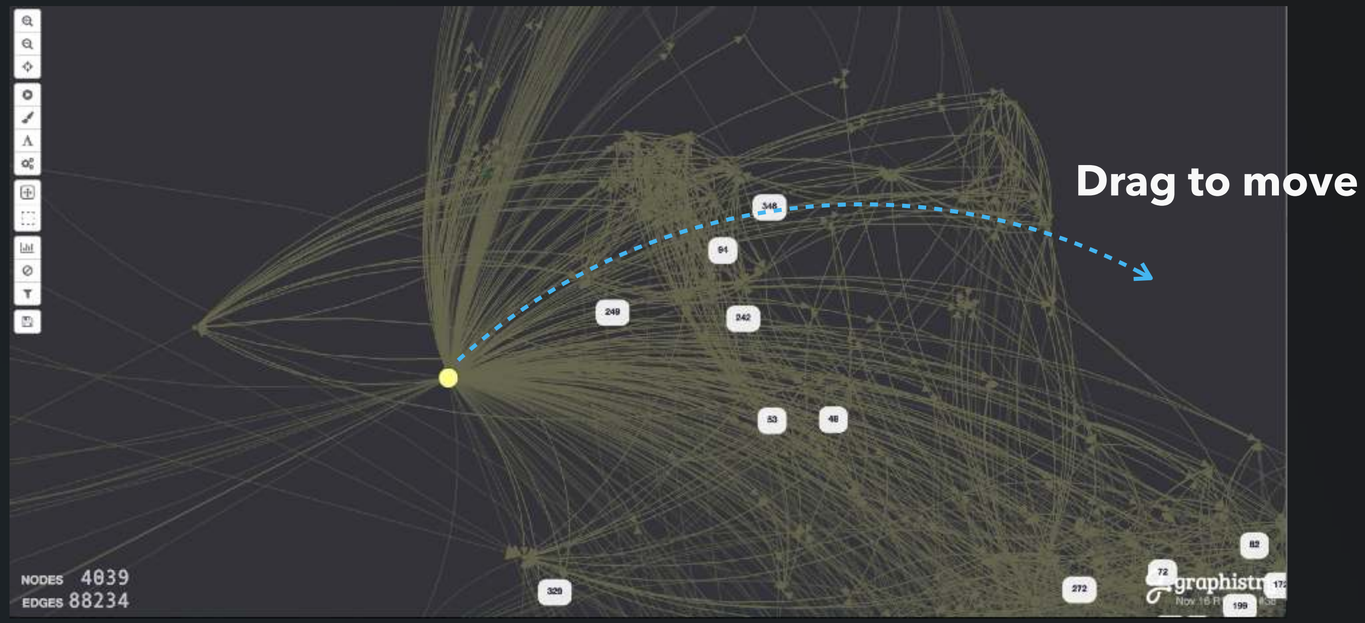

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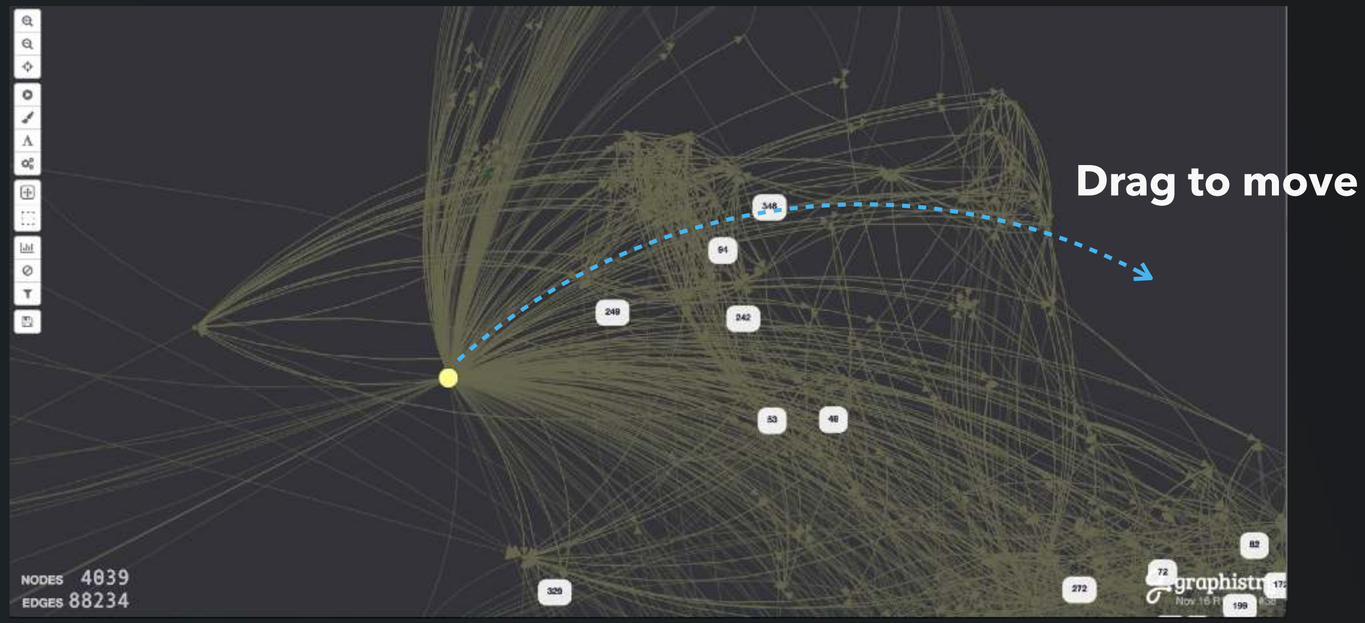

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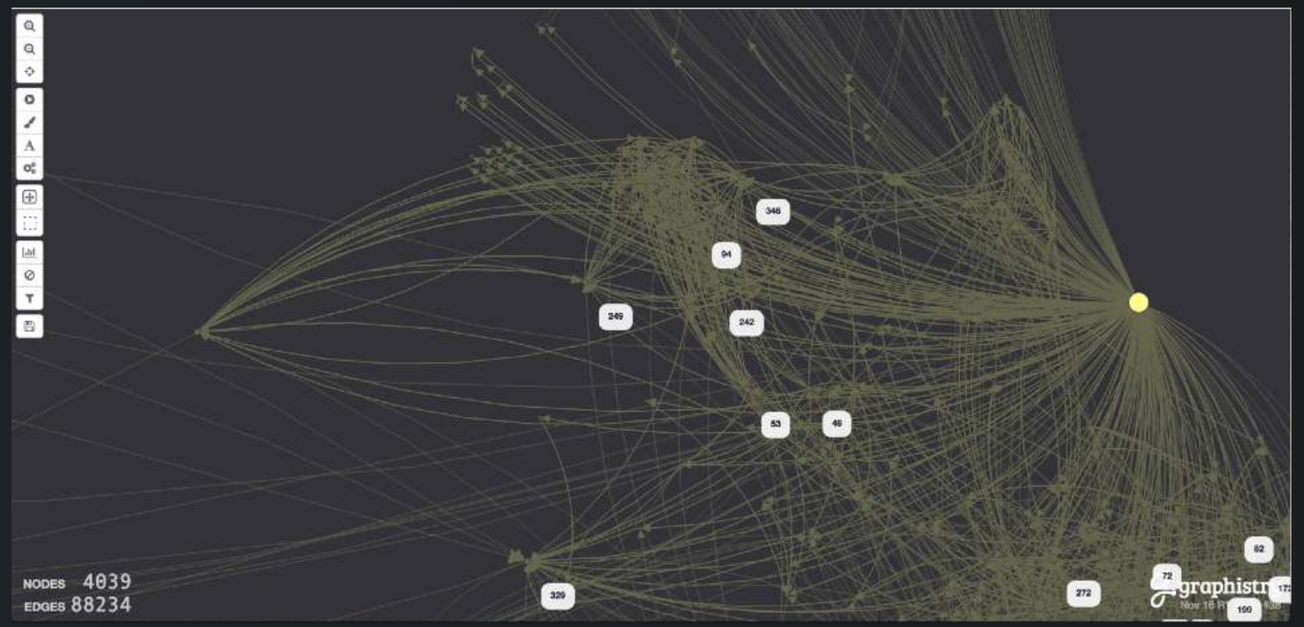

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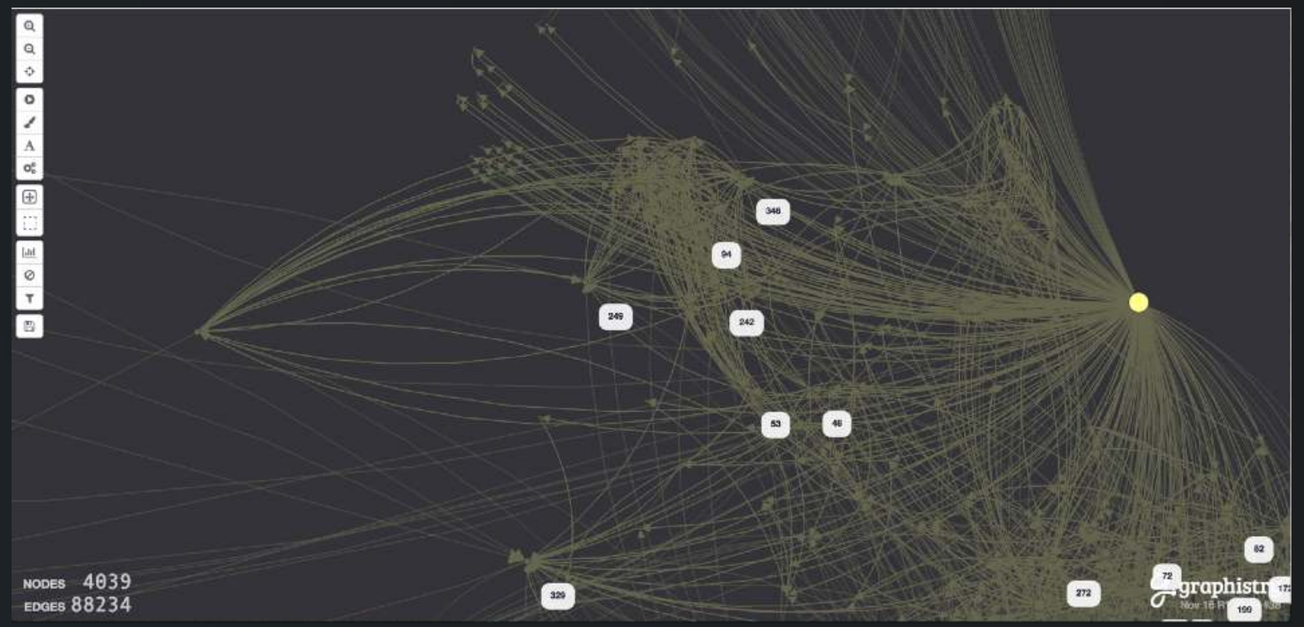

Selecting and Moving Multiple Nodes

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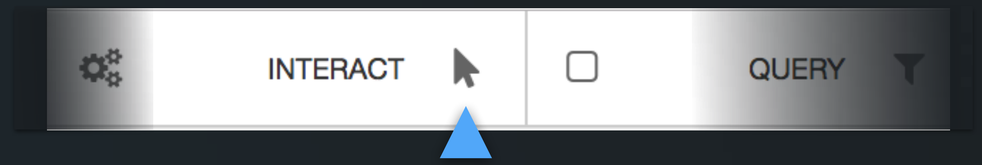

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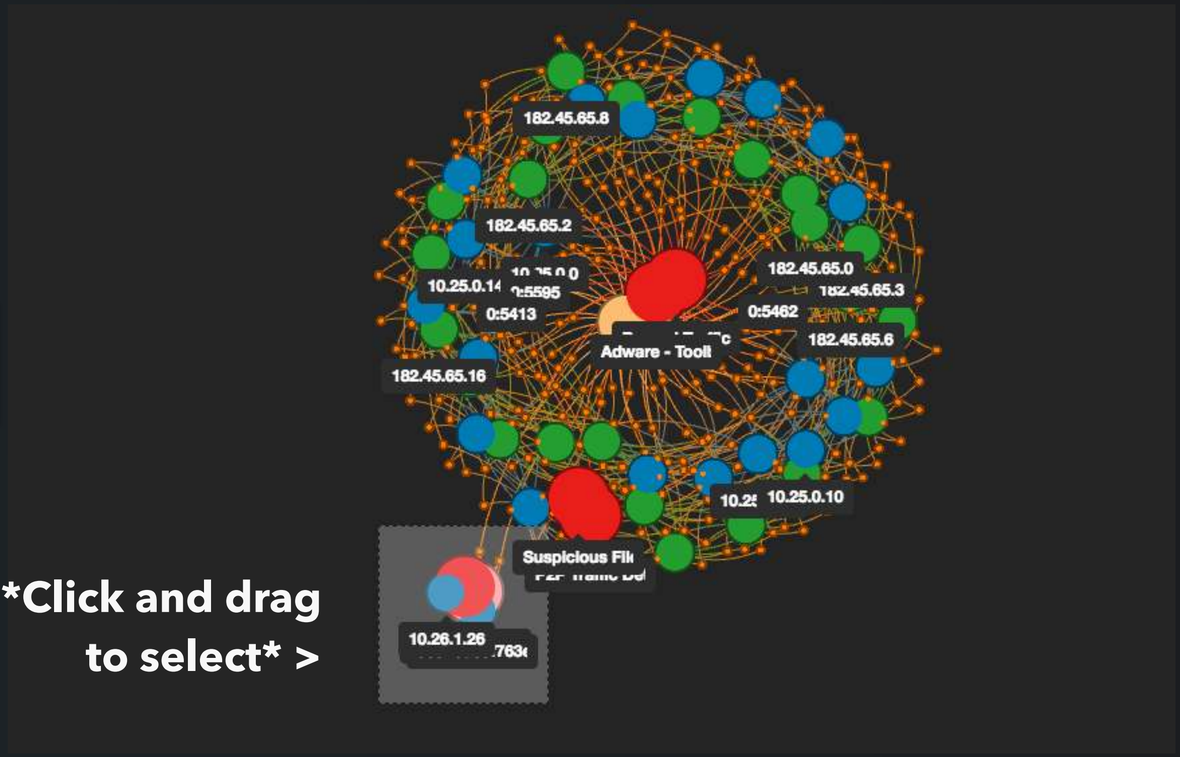

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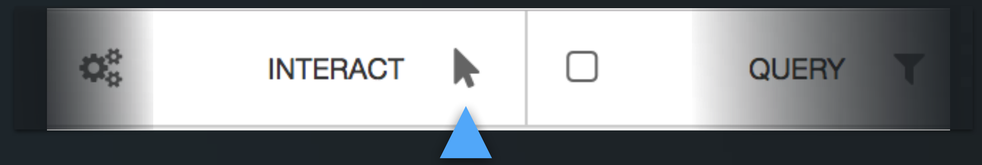

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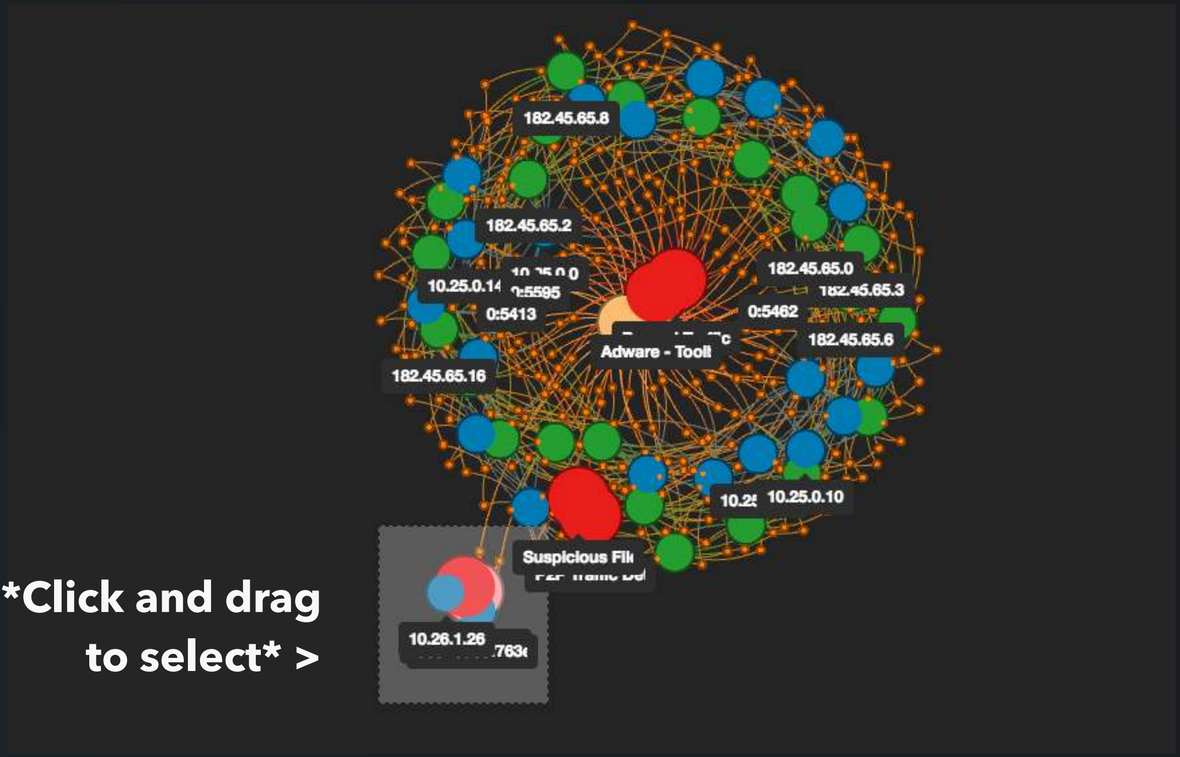

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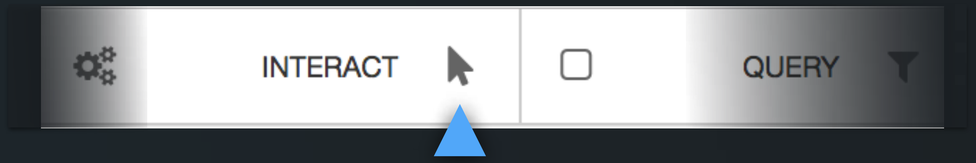

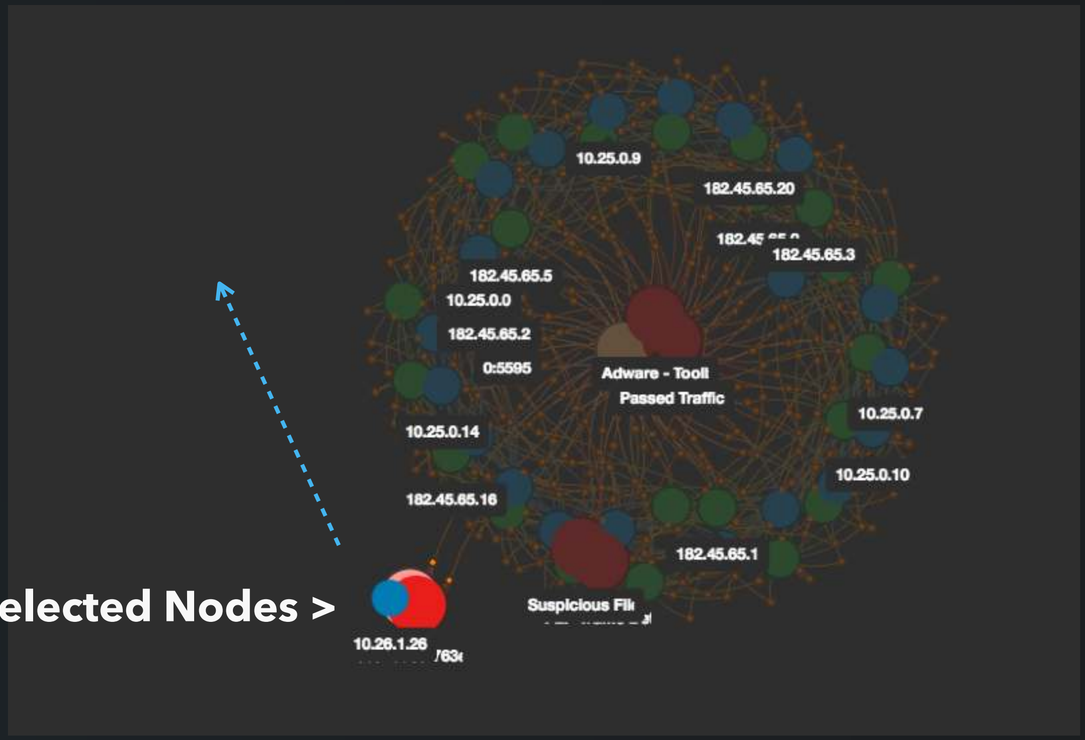

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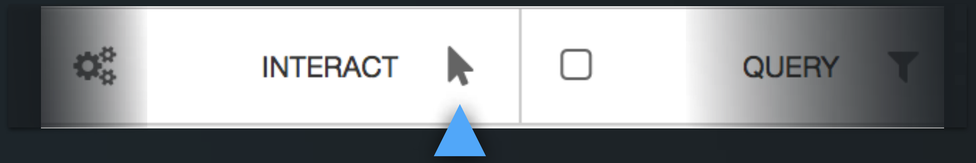

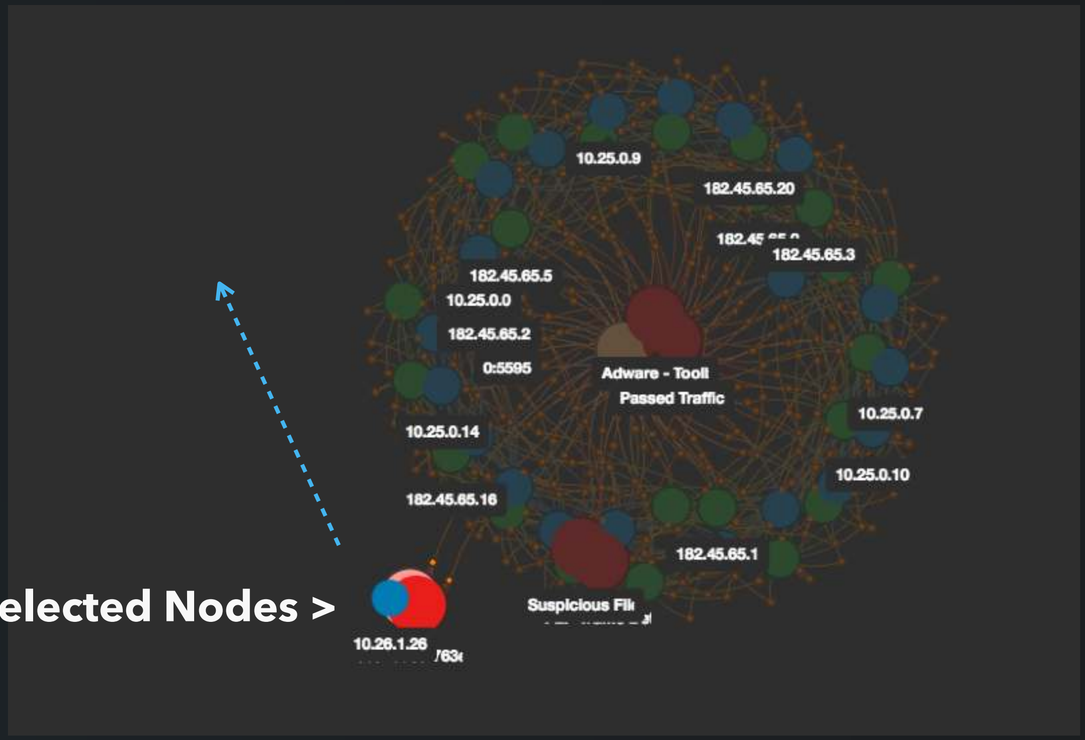

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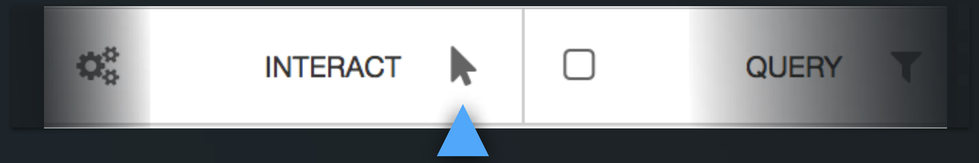

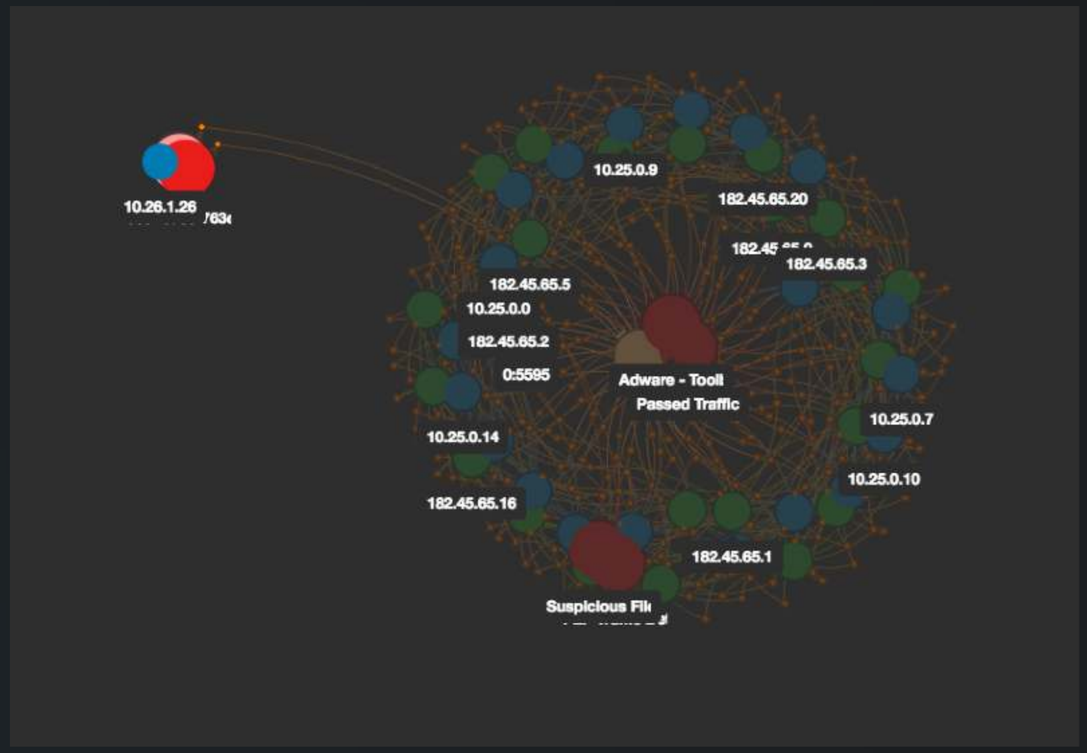

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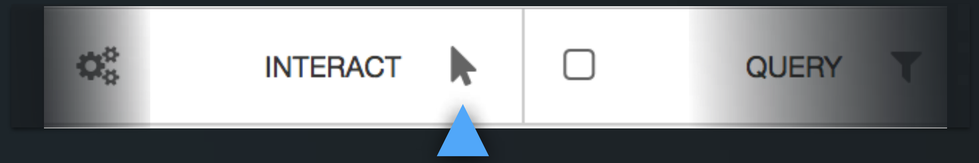

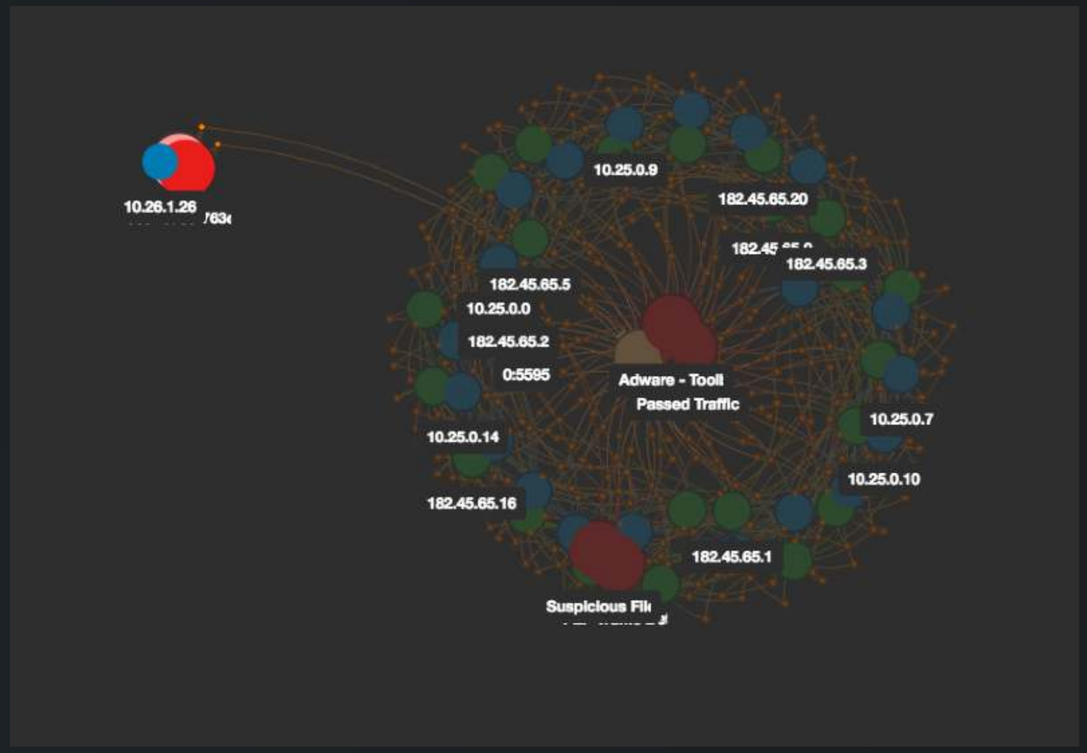

Histogram Panel & Data Brush

The histogram panel allows you visualize properties within your graph, and create filters on the fly by selecting sections of the chart.

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For instance…

This histogram is looking at the **degree** `(point:degree)` property of all the data within our graph.

Our histogram creates a representation of our graph, broken down into bins.

Things to try:

- *Hover* over the bins to see the nodes or edges highlighted in the graph.
- Click on a bin to create a filter from it

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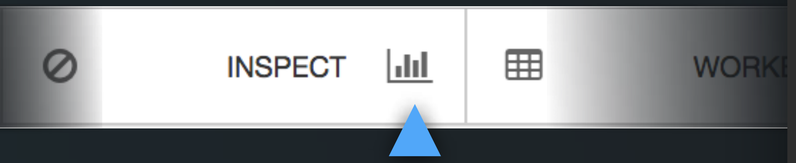
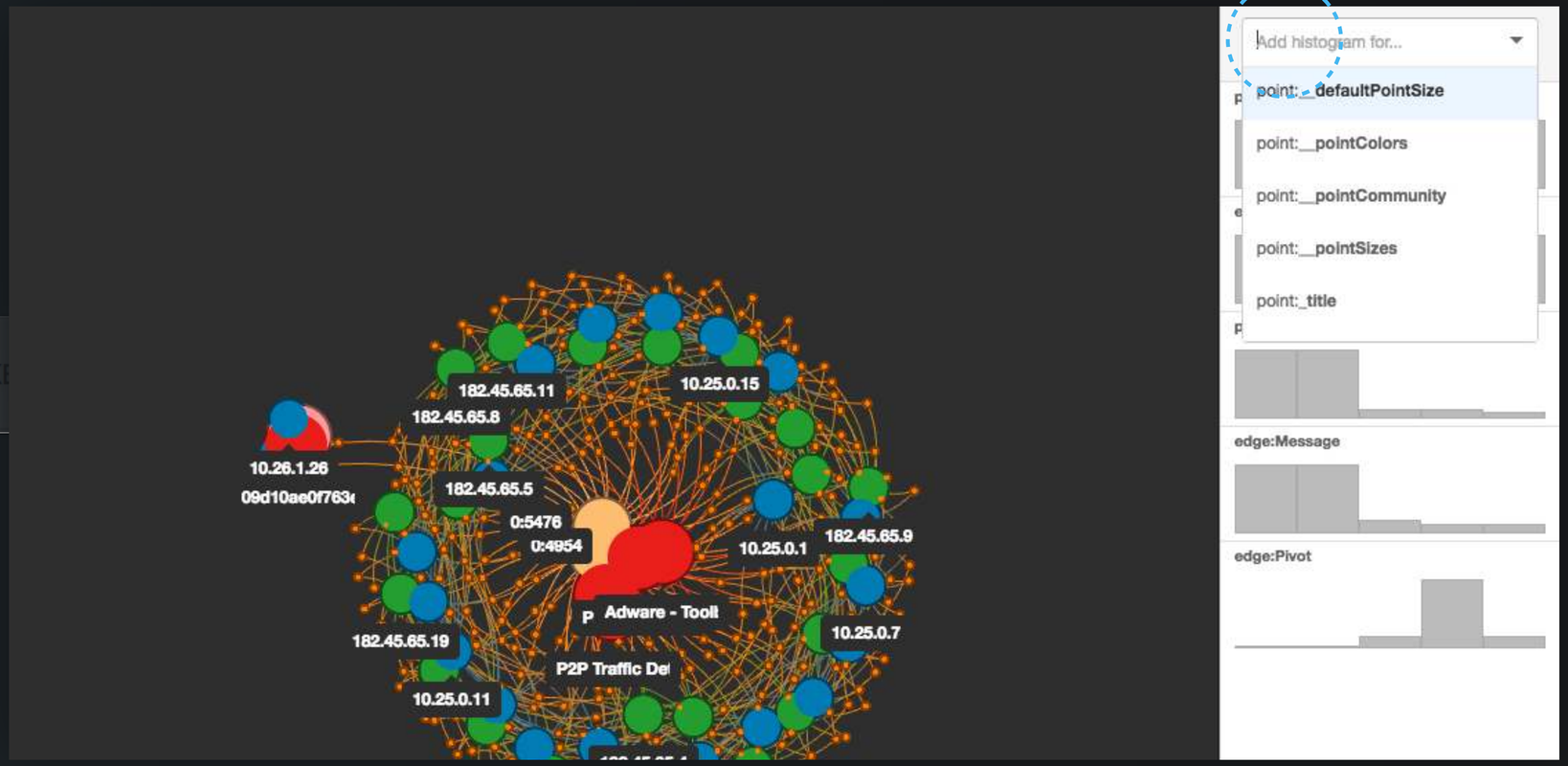
Histogram Panel

To add a new histogram :

1. **Open the histogram panel with the toolbar**
2. Use the search bar to create a histogram for any desired attribute





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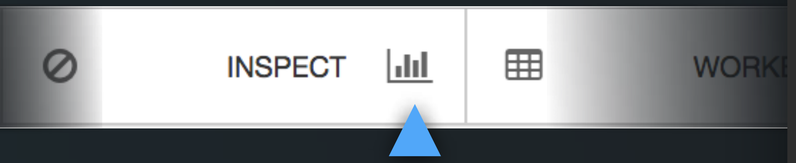

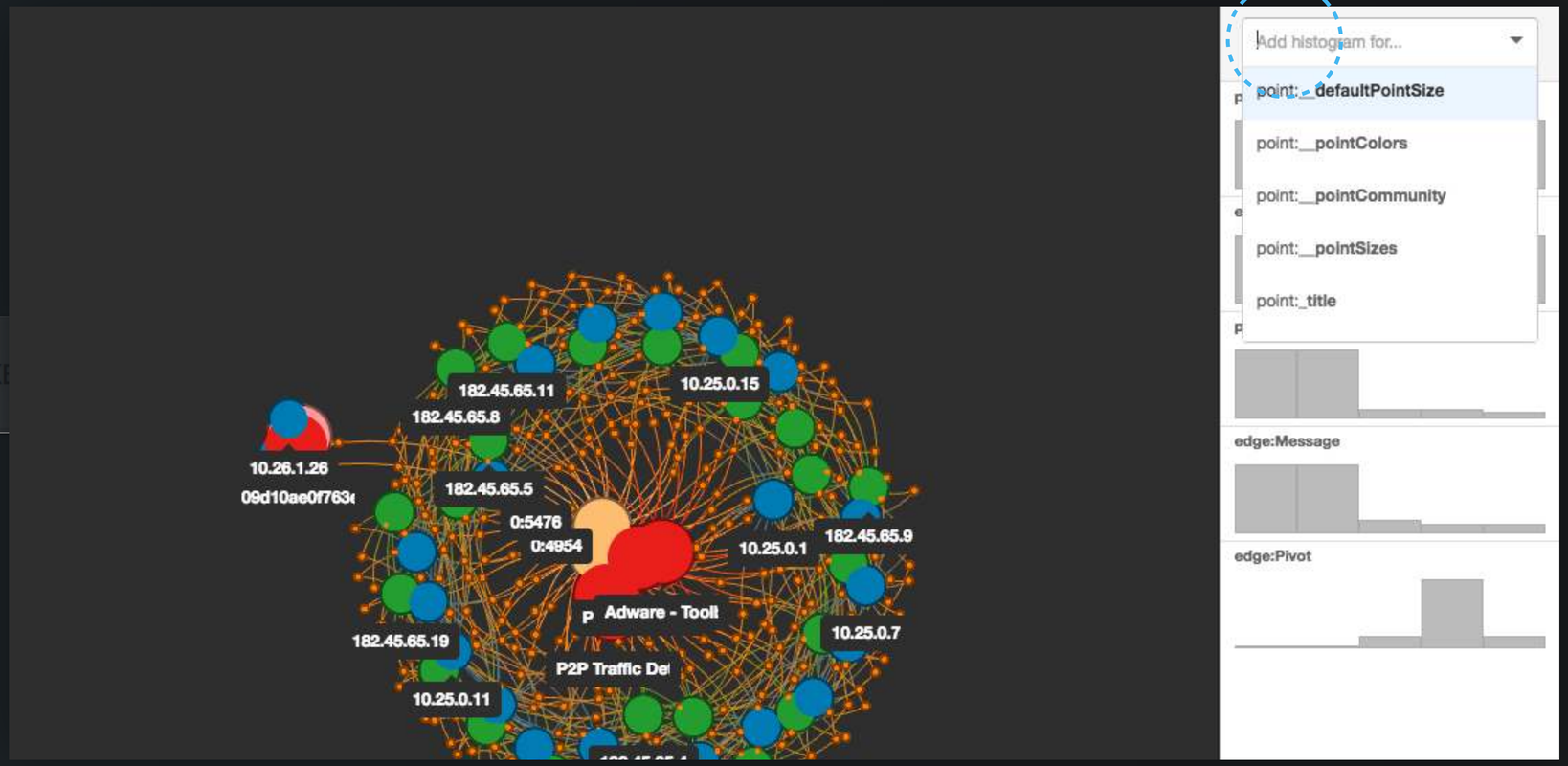

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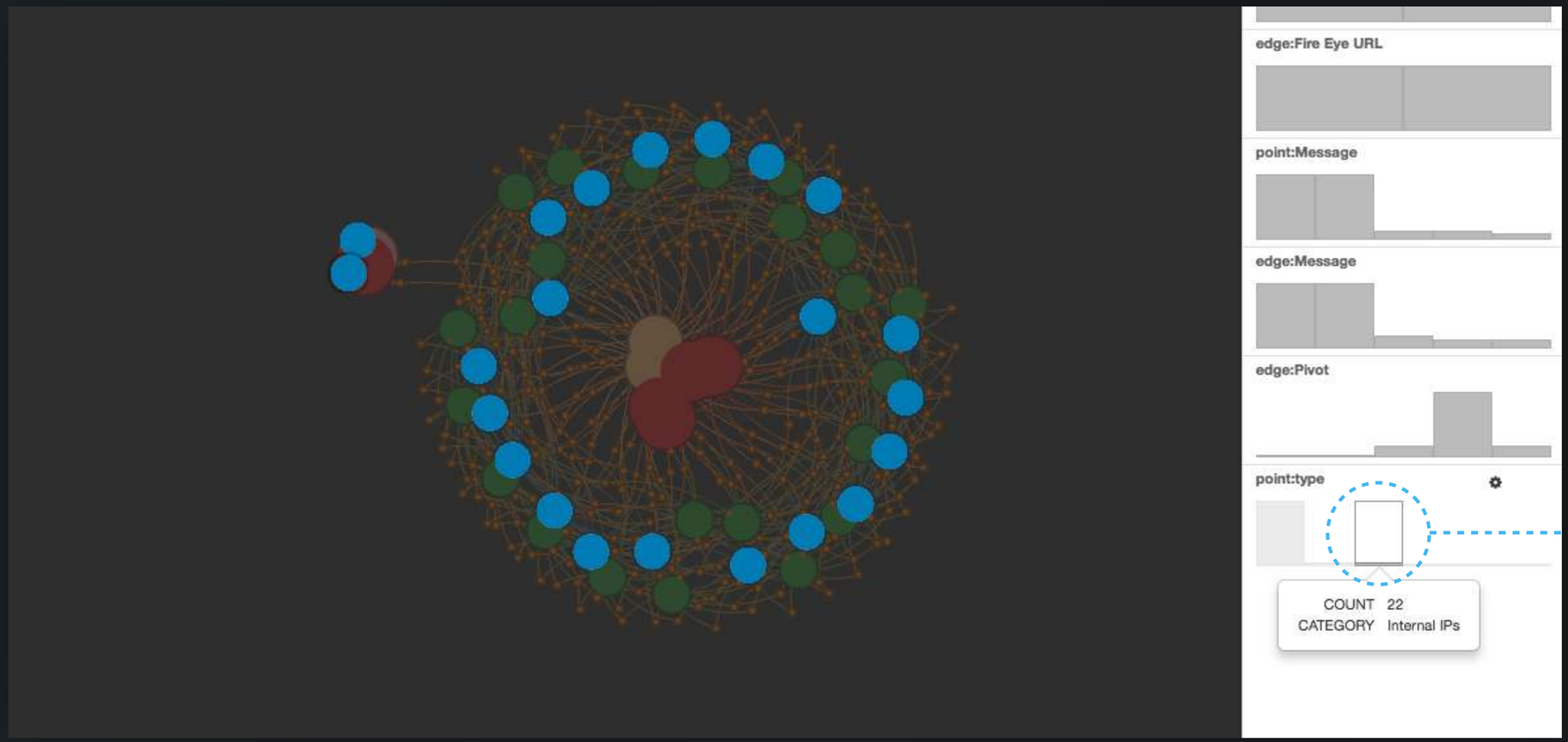

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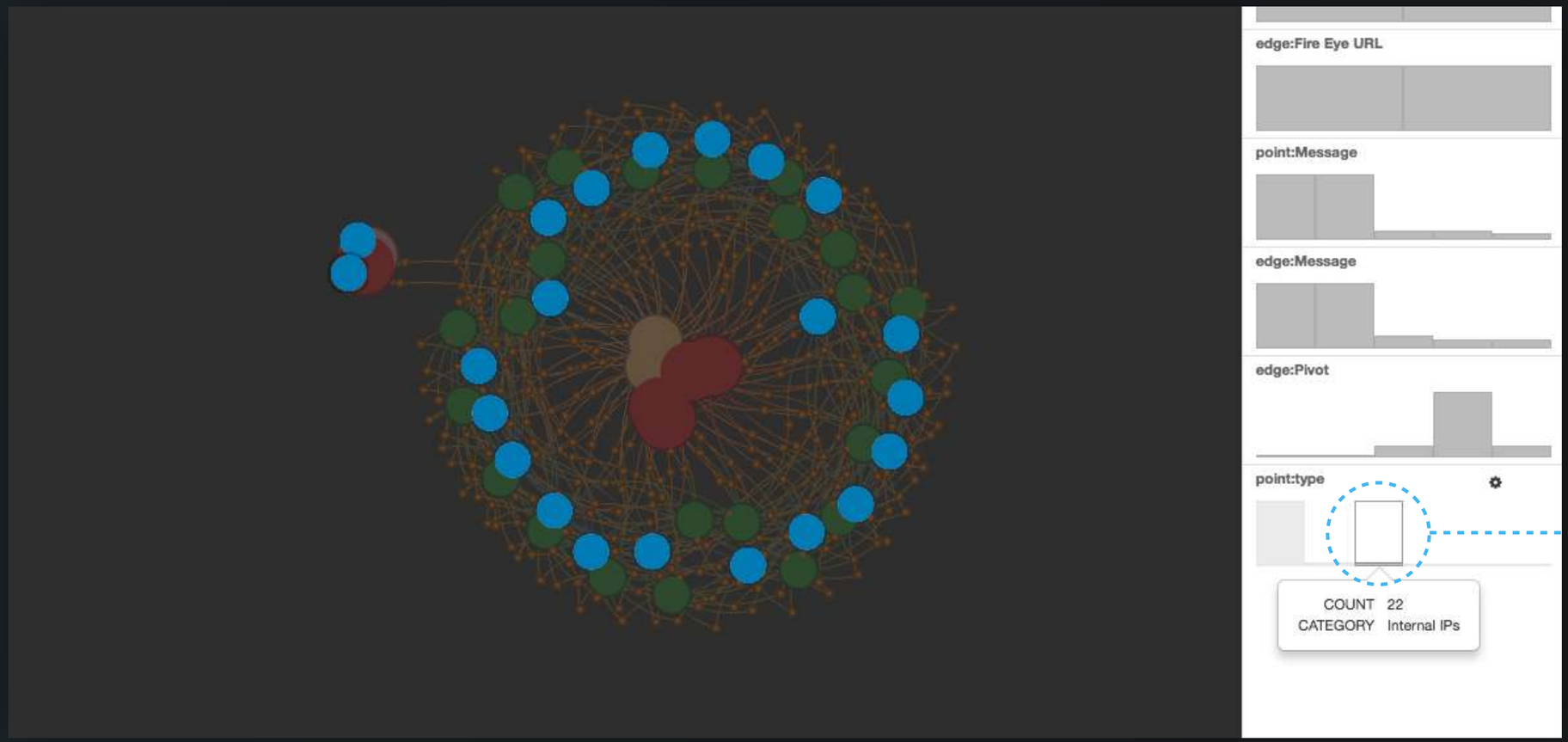

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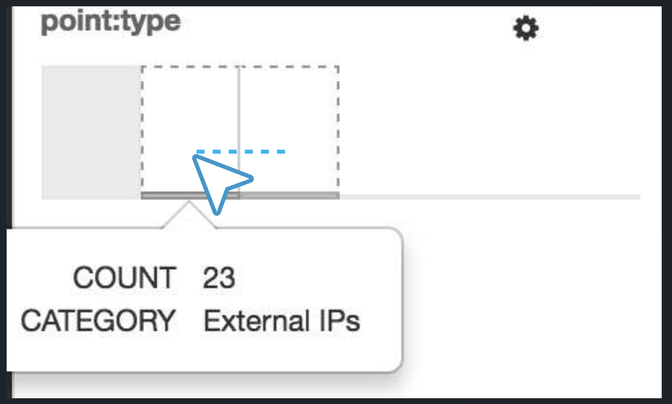
To create a filter from a histogram section

1. **Click and drag which sections of the histogram you'd like to see**
2. **Release click to apply filter to graph**



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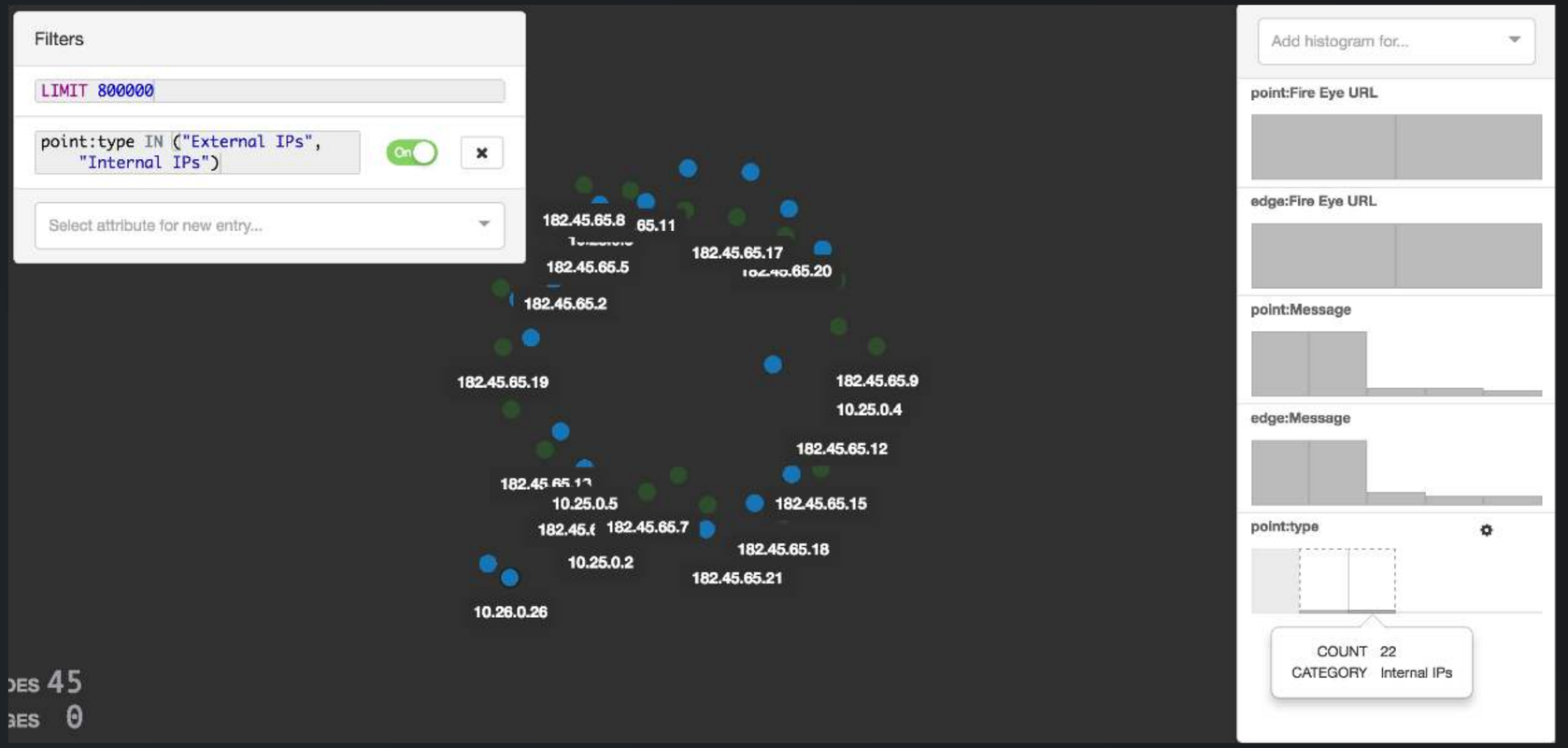

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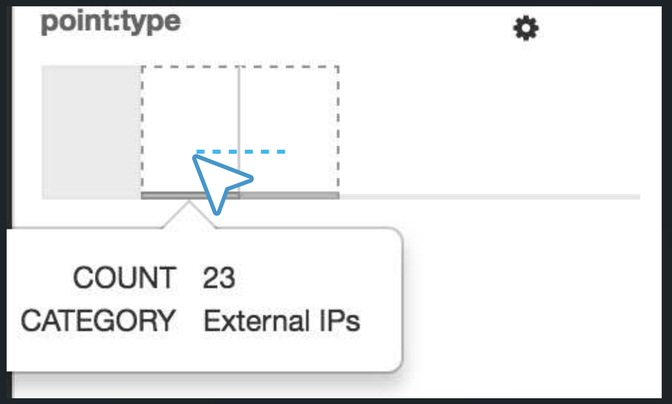

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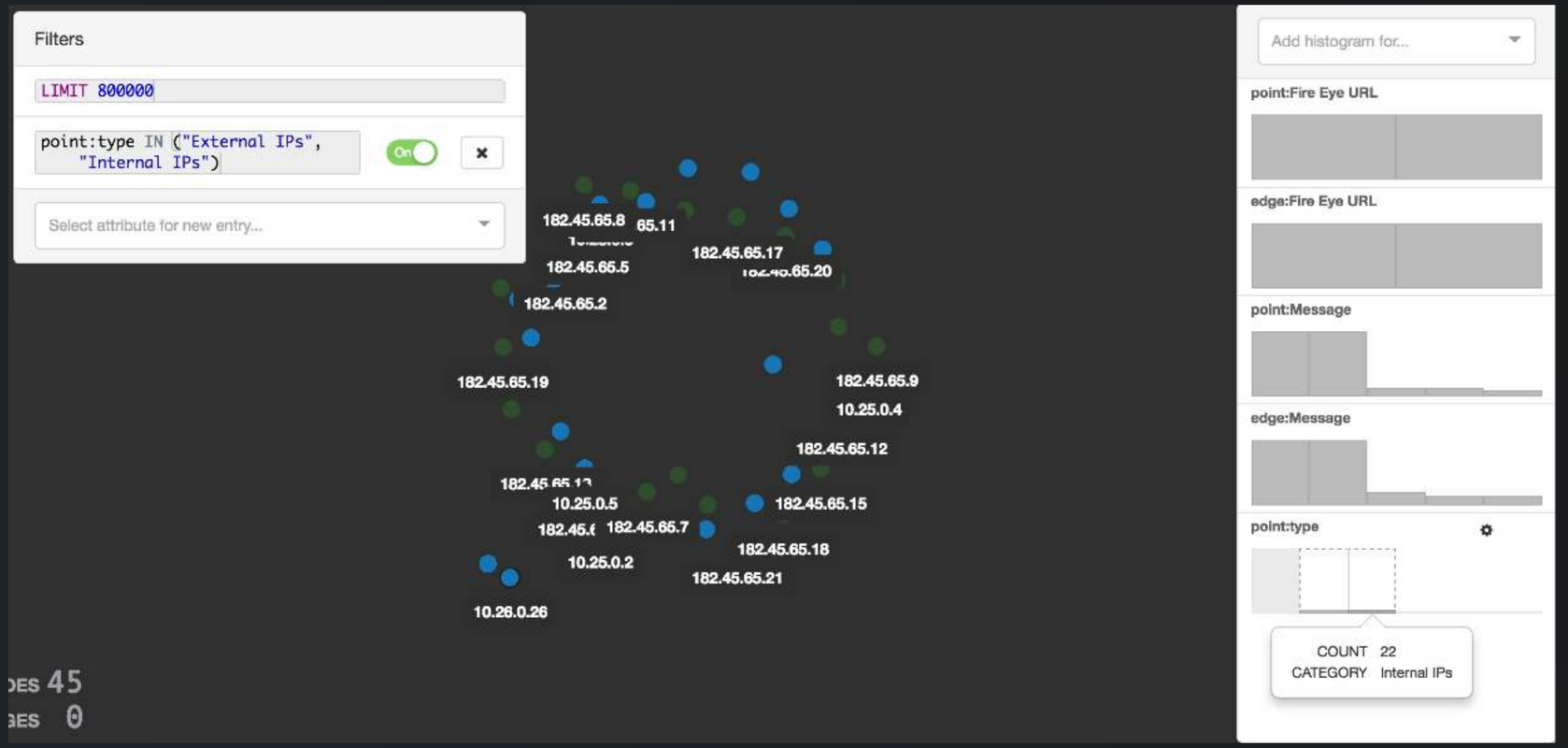

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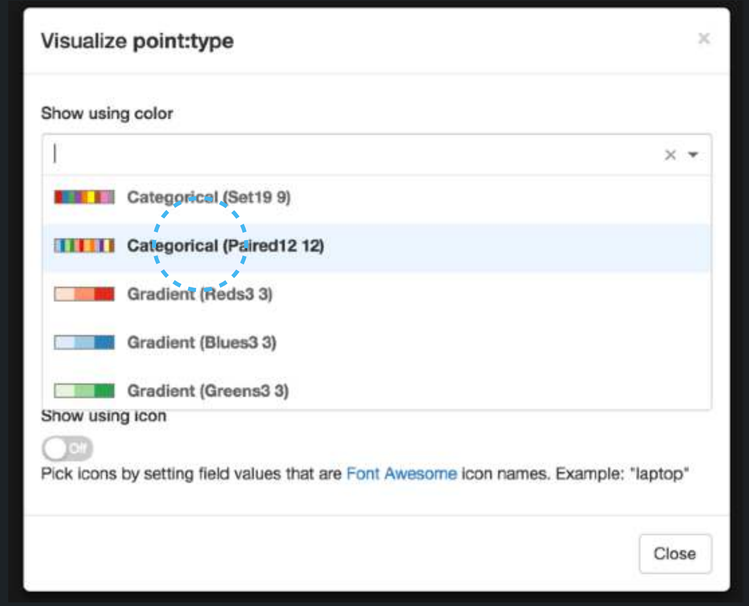

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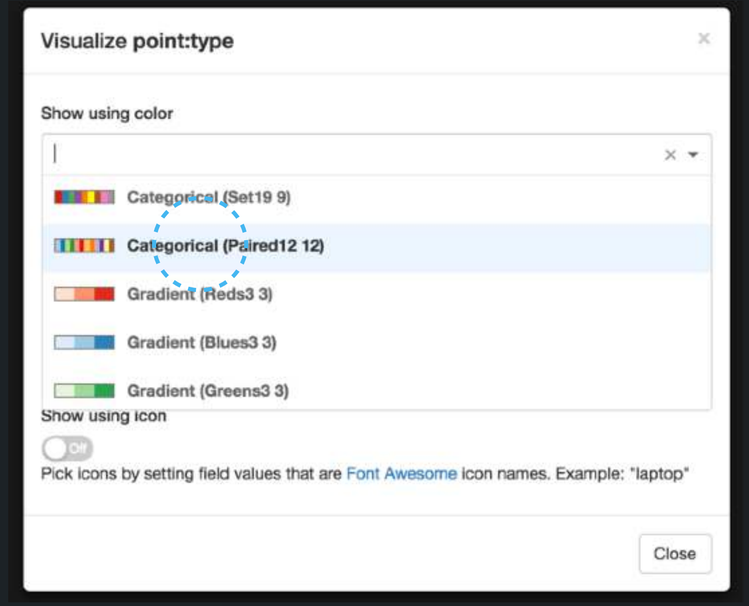

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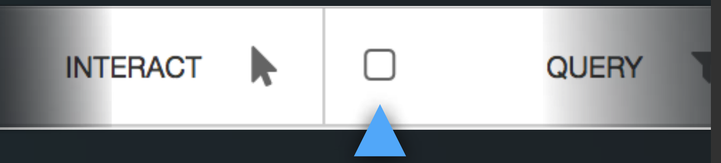
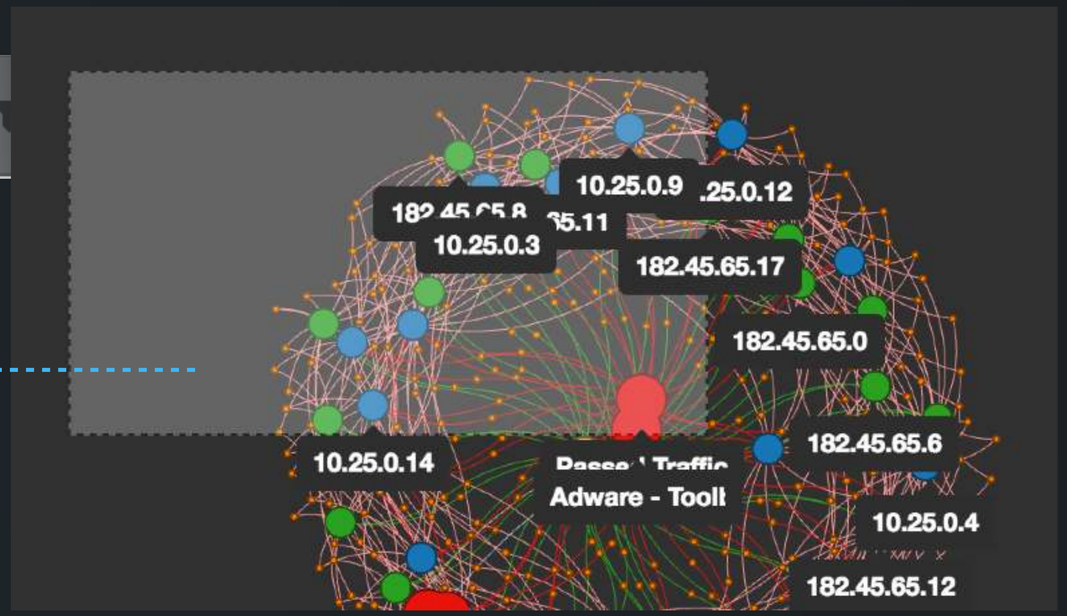
The data brush allows you to highlight a section of the graph, and visualize the selected elements within the histogram panel, and data table.

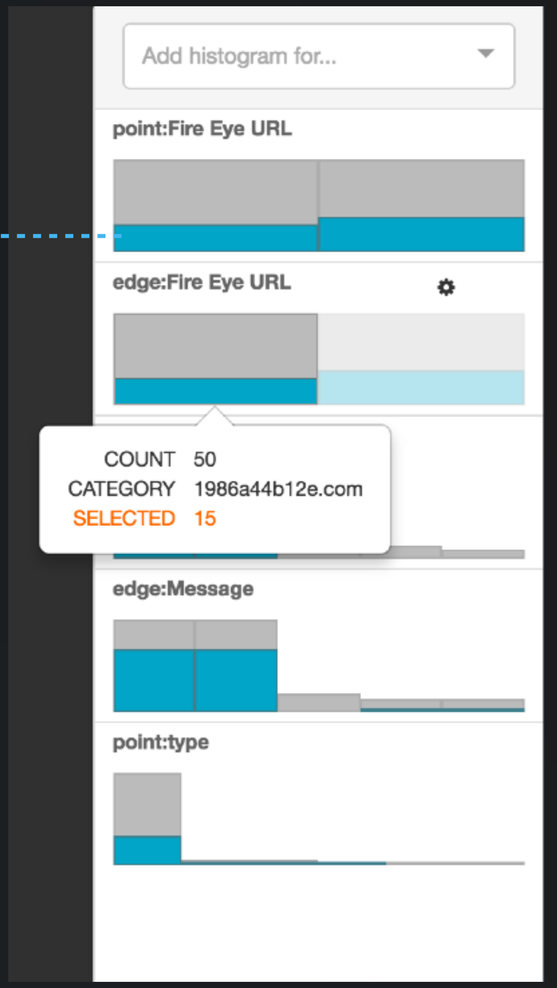
To use the data brush

1. Select the data brush icon from the toolbar
2. Click and drag to select a section of your graph
3. See corresponding values in histogram panel





Blue areas are selected nodes & edges.
Hover over to see details



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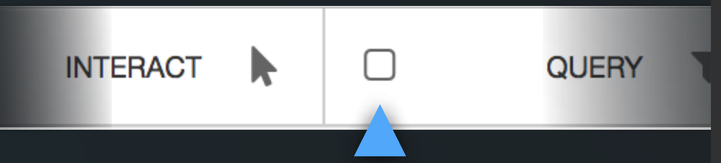

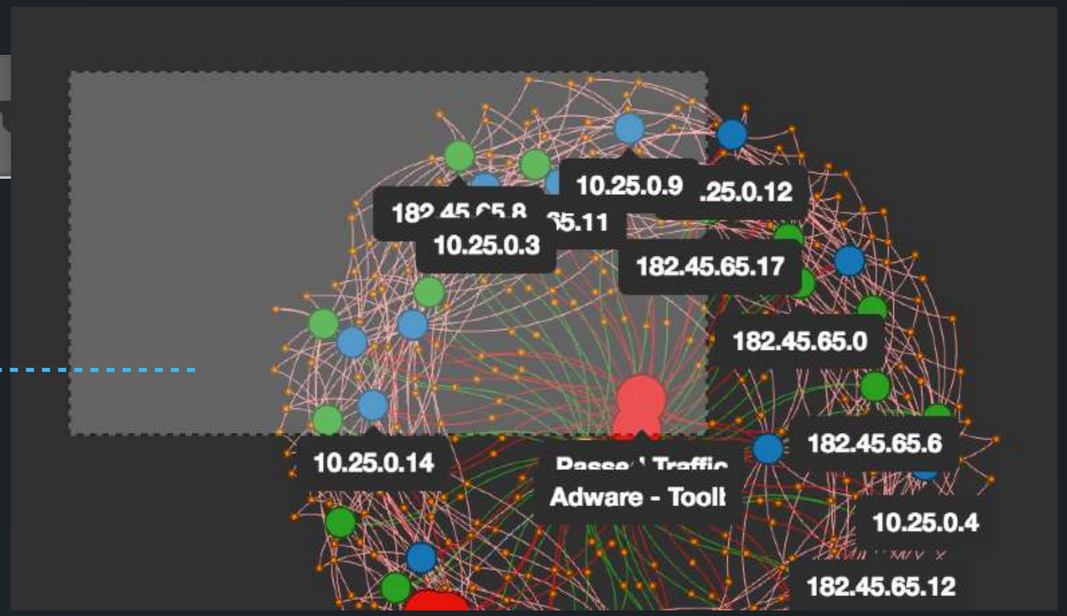

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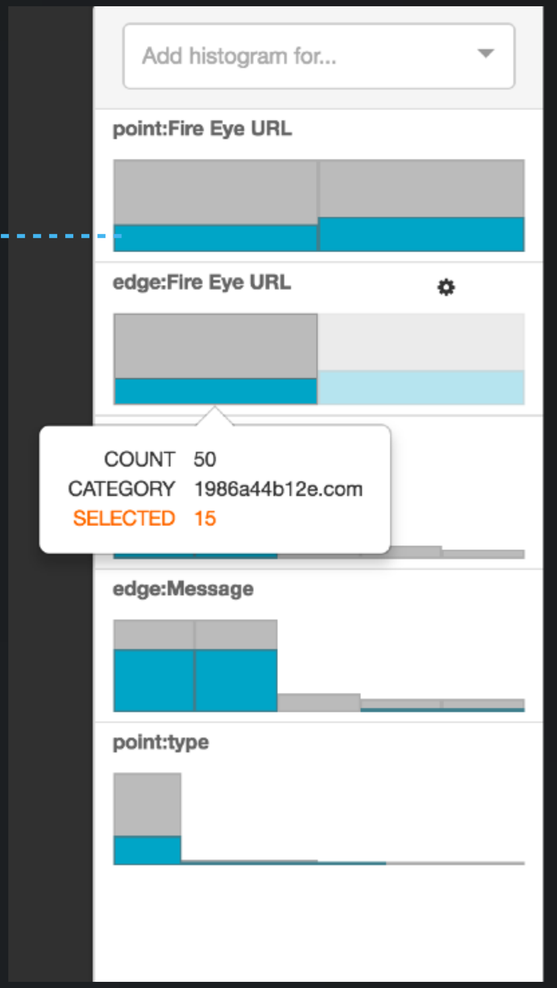

Filters & Exclusions

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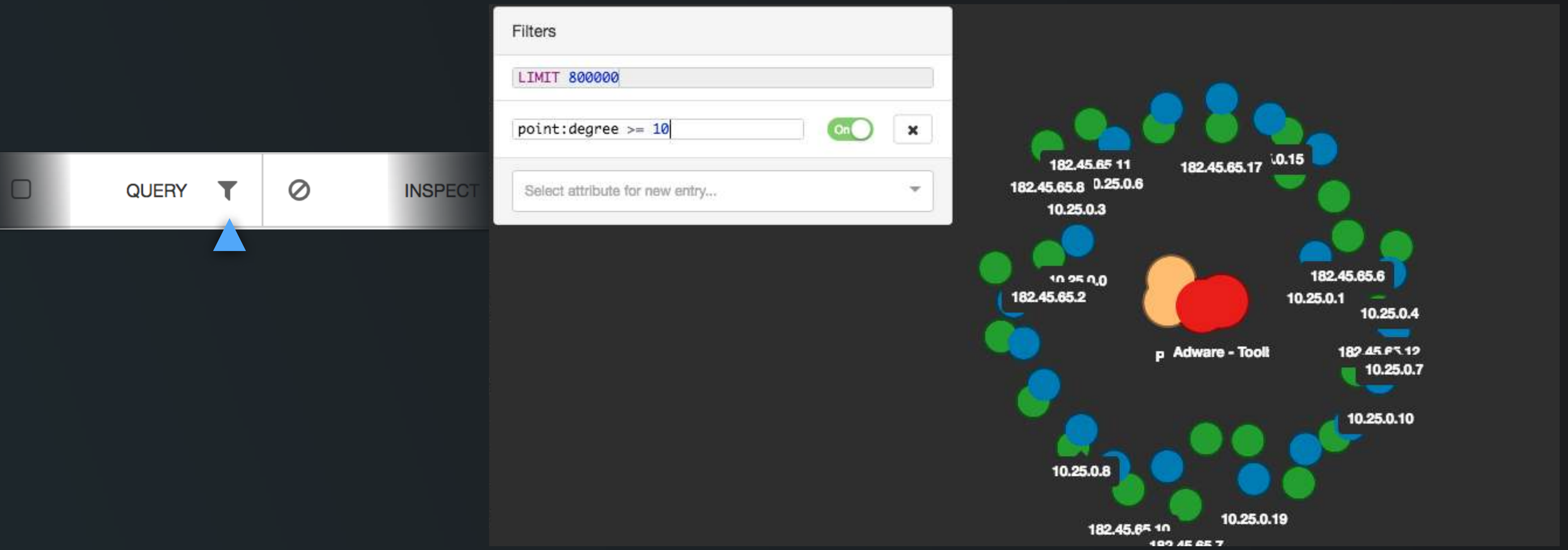

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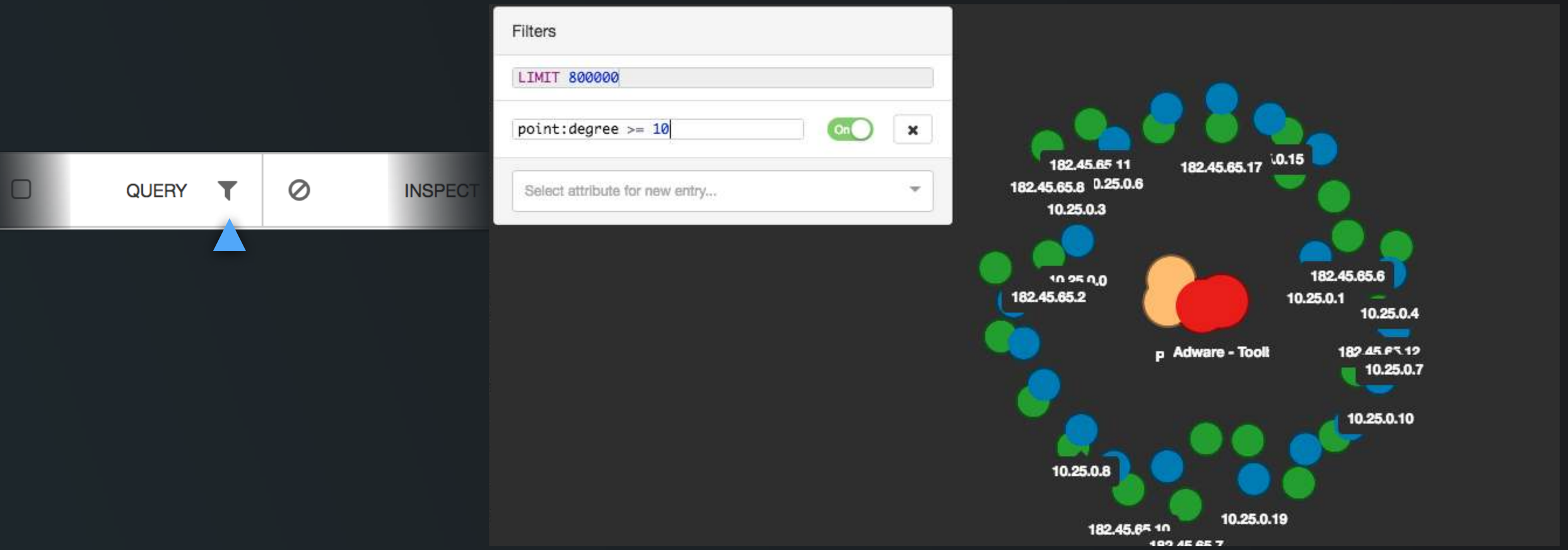
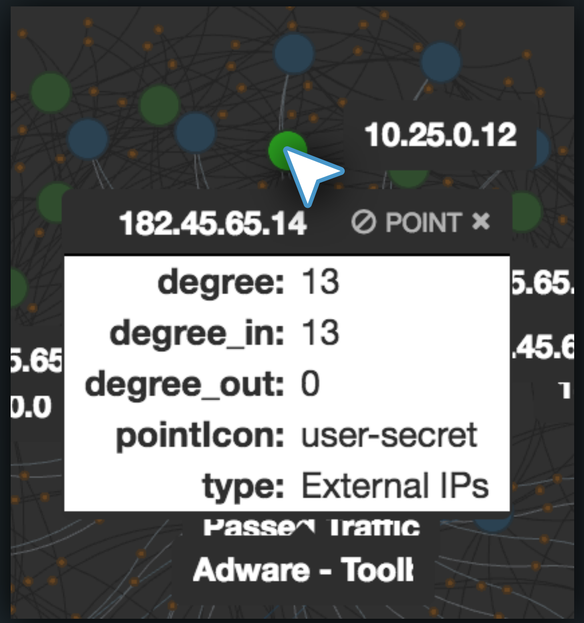
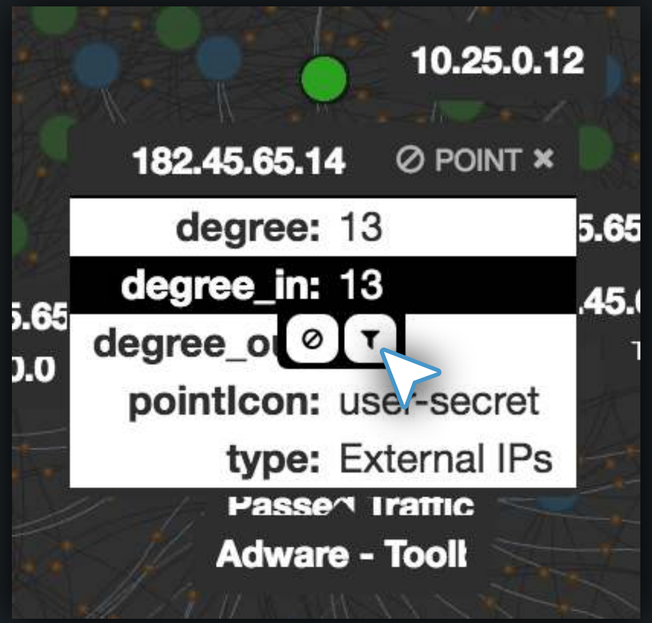


Filter with Label

To create a filter from a node property:

1. **Click on the node to open its label**
2. **Hover over the desired property to expose its filter & exclusion options**
3. **Select the Filter option to generate a filter**





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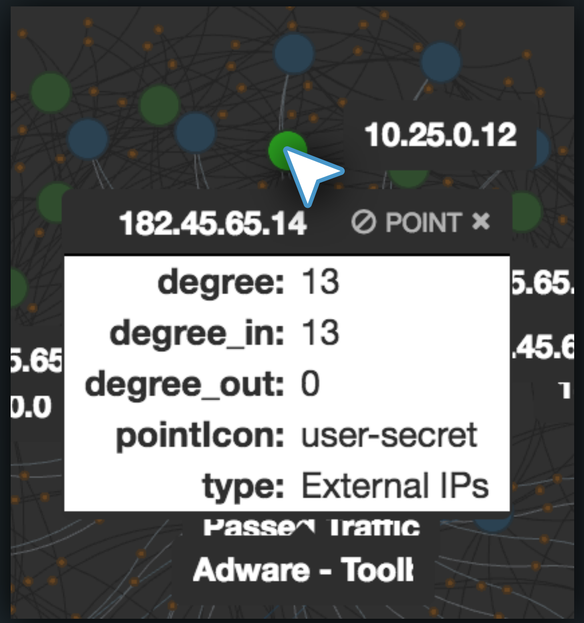

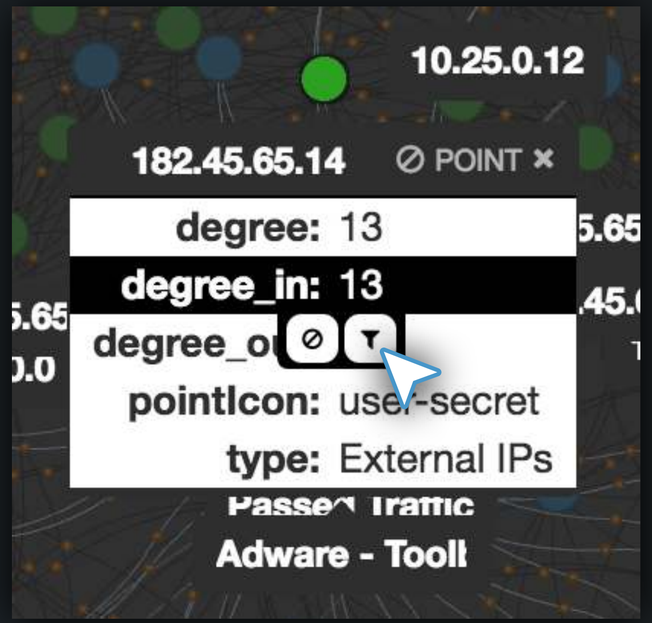

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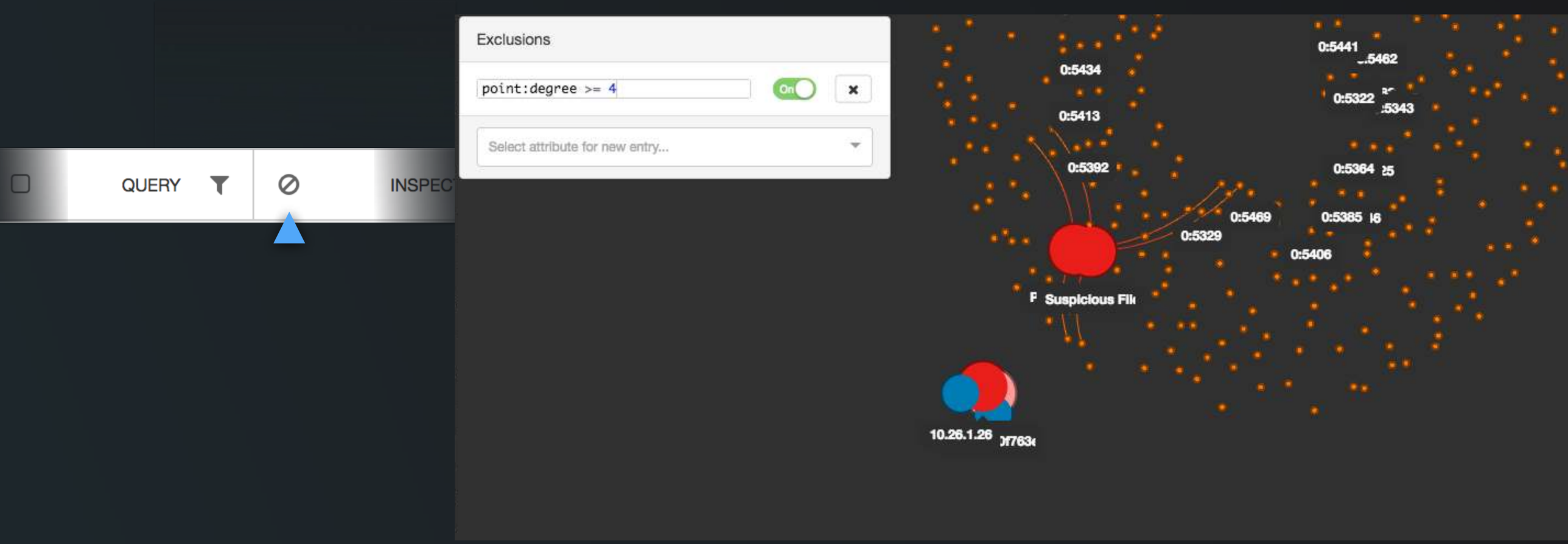

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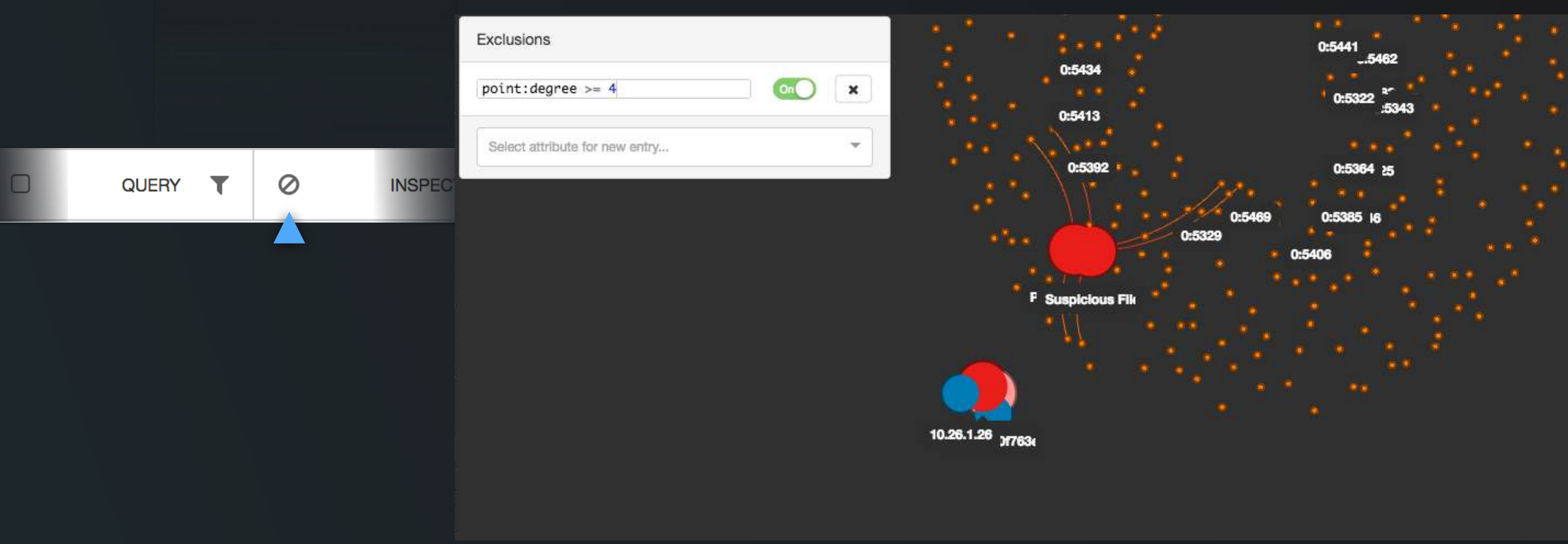

Exclusion with Label

To exclude a selected node using its label

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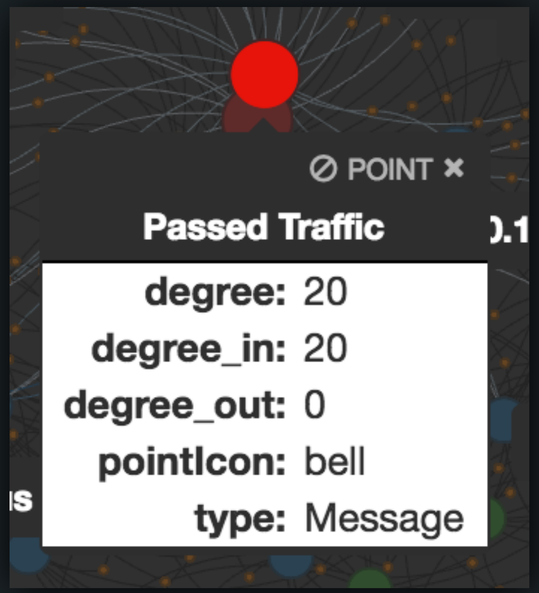

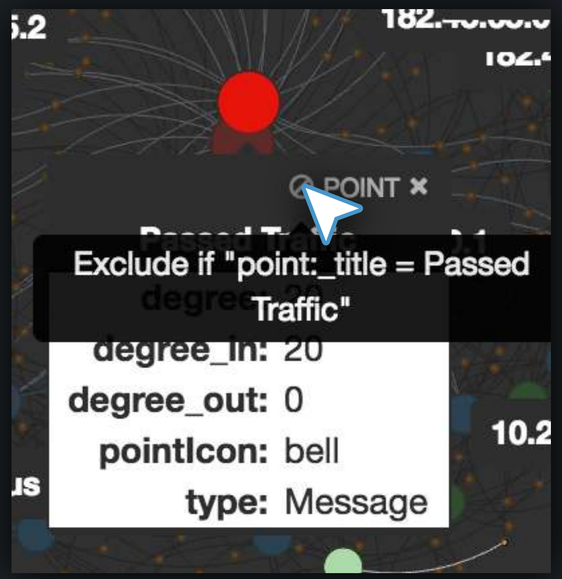

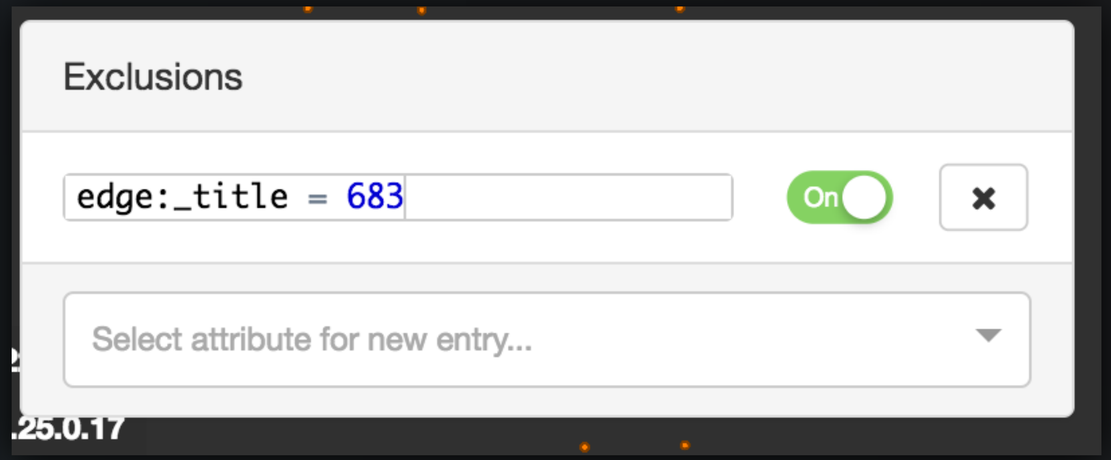

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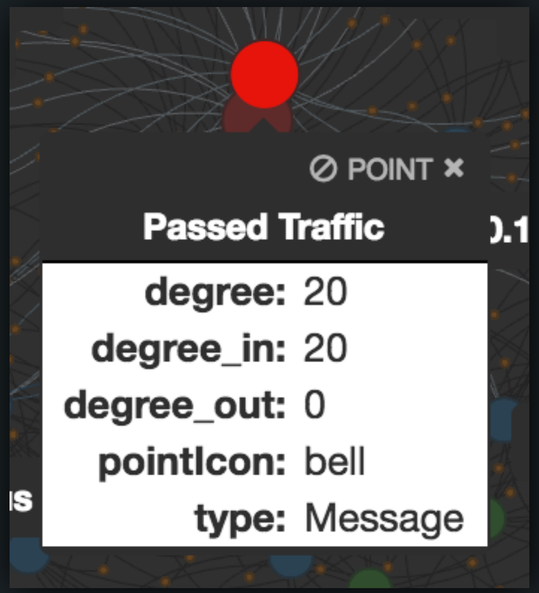

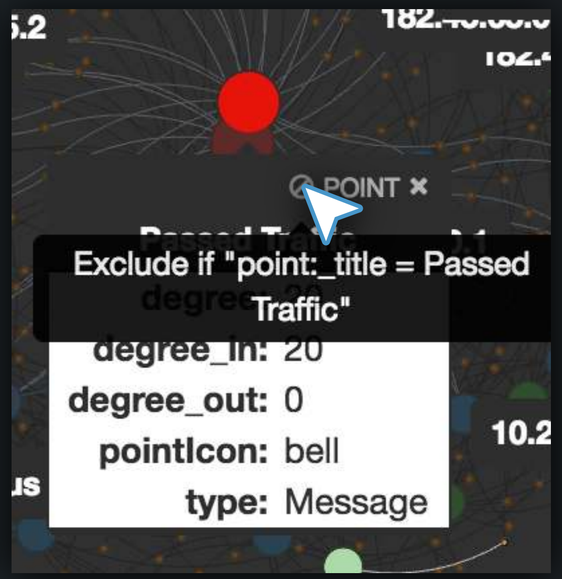

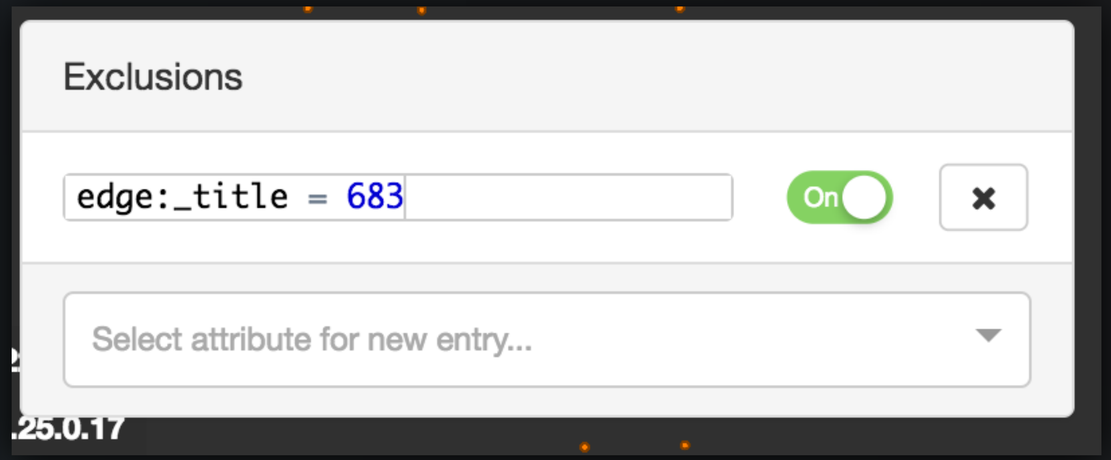

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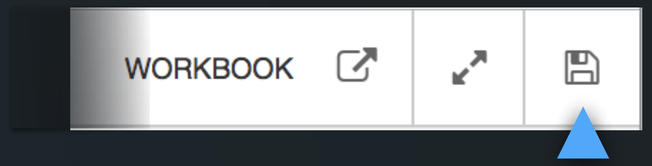

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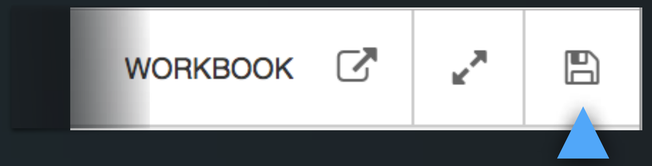

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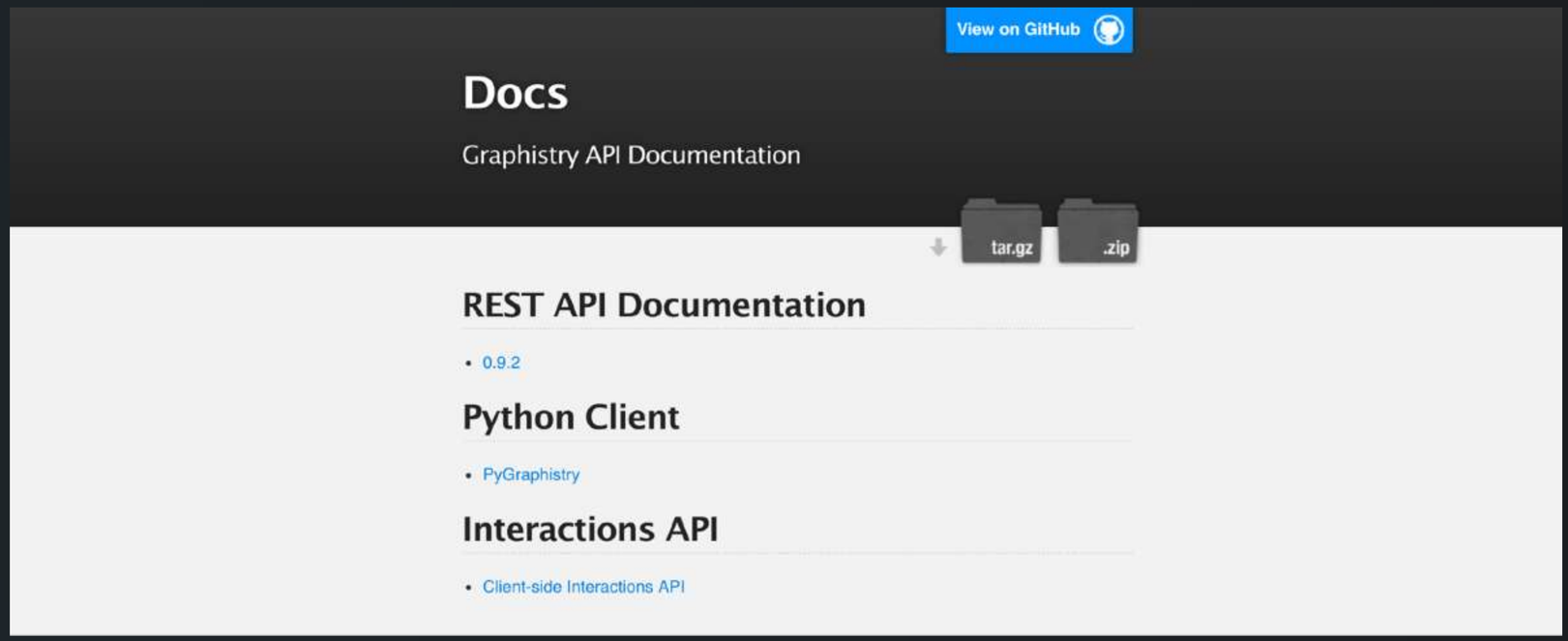

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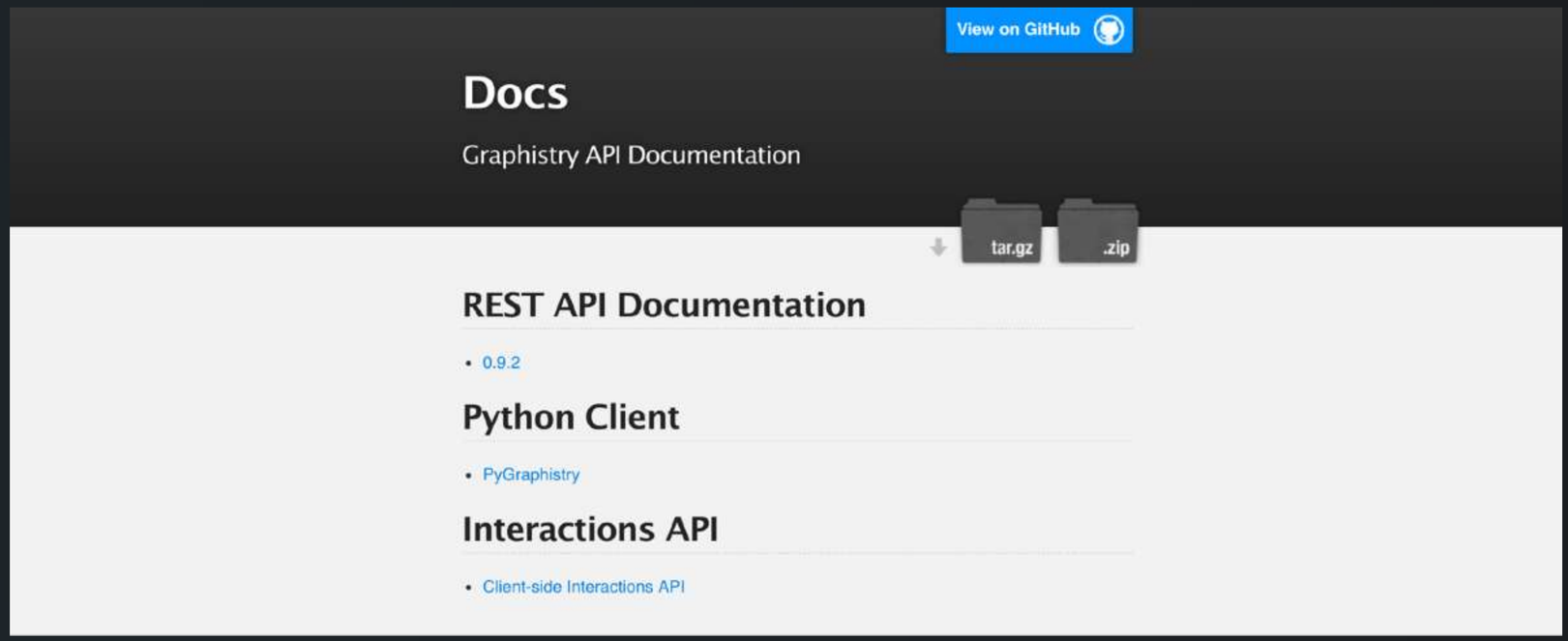

Tutorial and Demo Notebooks

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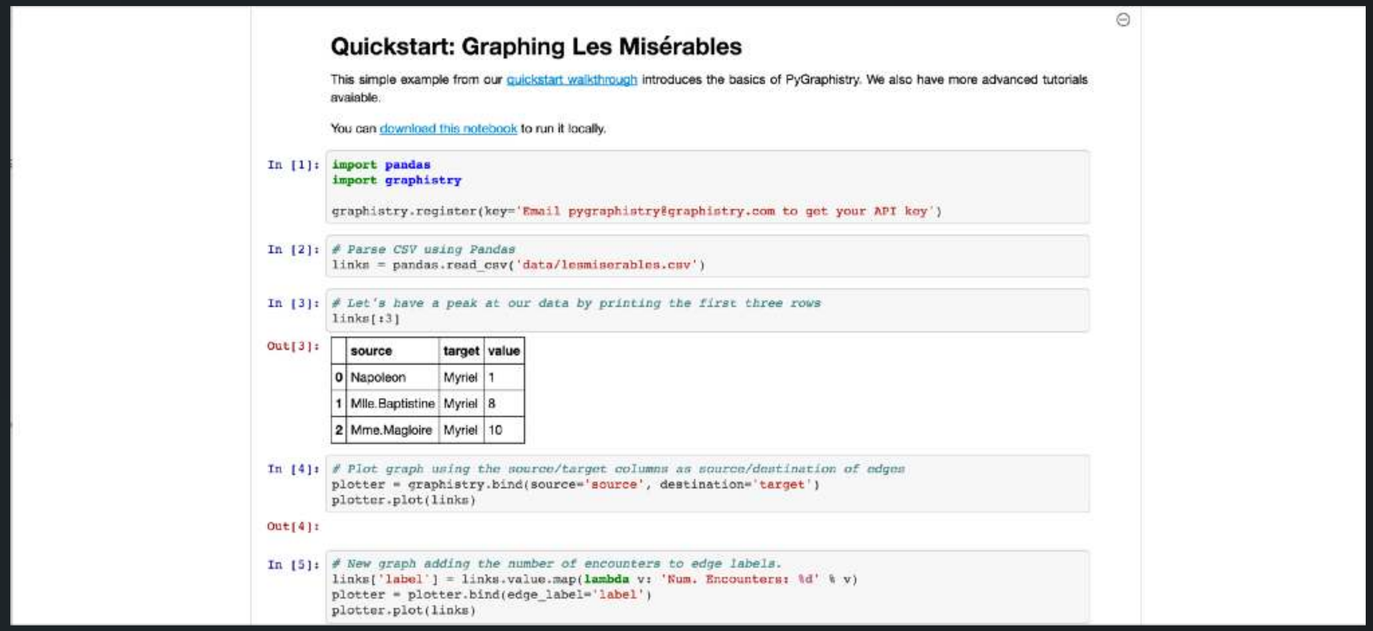
- Each one of these notebooks is also prepackaged in the Jupiter Notebook container that is provided in the release



Quickstart: Graphing Les Misérables

This simple example from our quickstart walkthrough introduces the basics of PyGraphistry. We also have more advanced tutorials available.

You can download this notebook to run it locally.

In [1]:
```
import pandas
import graphistry

graphistry.register(key='Email pygraphistry@graphistry.com to get your API key')
```

In [2]:
```
# Parse CSV using Pandas
links = pandas.read_csv('data/lesmiserables.csv')
```

In [3]:
```
# Let's have a peak at our data by printing the first three rows
links[:3]
```

Out[3]:

	source	target	value
0	Napoleon	Myriel	1
1	Mlle.Baptistine	Myriel	8
2	Mme.Magloire	Myriel	10

In [4]:
```
# Plot graph using the source/target columns as source/destination of edges
plotter = graphistry.bind(source='source', destination='target')
plotter.plot(links)
```

Out[4]:

In [5]:
```
# New graph adding the number of encounters to edge labels.
links['label'] = links.value.map(lambda v: 'Num. Encounters: %d' % v)
plotter = plotter.bind(edge_label='label')
plotter.plot(links)
```

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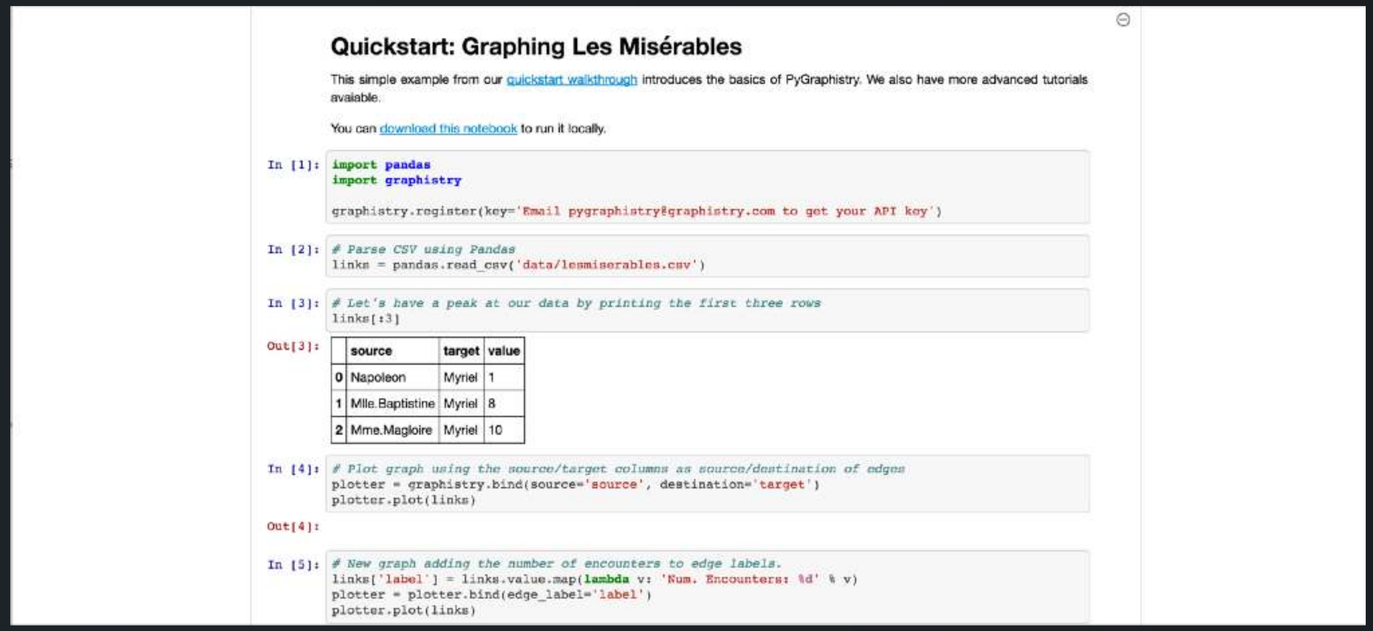

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In [3]:
```
# Let's have a peak at our data by printing the first three rows
links[:3]
```

Out[3]:

	source	target	value
0	Napoleon	Myriel	1
1	Mlle.Baptistine	Myriel	8
2	Mme.Magloire	Myriel	10

In [4]:
```
# Plot graph using the source/target columns as source/destination of edges
plotter = graphistry.bind(source='source', destination='target')
plotter.plot(links)
```

Out[4]:

In [5]:
```
# New graph adding the number of encounters to edge labels.
links['label'] = links.value.map(lambda v: 'Num. Encounters: %d' % v)
plotter = plotter.bind(edge_label='label')
plotter.plot(links)
```

Tutorial and Demo Notebooks

Notebook Name	Description
Deliverable Testing and Tutorial Notebooks	
UploadAPI	REST Data Upload tutorial
Workbook	Demonstrates and tests Graphistry's saving and sharing functionality.
Benchmarking/TestDatasets	Generates test datasets specified in the program plan.
Tutorials and Demos	
MiserablesDemo.ipynb	The 'Hello World' of graph visualization
MarvelTutorial.ipynb	Visualizes social network of super heros based on their coappearances in marvel comics.
BitcoinTutorial.ipynb	Silk Road Bitcoin Embezzling Visualization
BiogridDemo.ipynb	Visualize proteins and their interactions from https://thebiogrid.org/
TitanDemo.ipynb	Integration with Titan graph database (now Datastax Graph)
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