



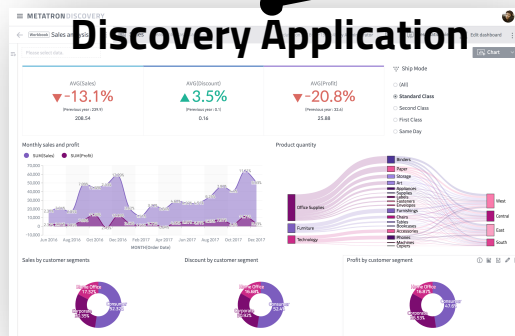
SKTelecom Big Data Discovery Solution

Spatial index optimization and GIS query support on Druid using Apache Lucene

powered by **metatron discovery**

Kyungtaak Noh, Navis Ryu

Who we are



Kyungtaak

Data Processing Engine



Navis

Hive PMC Member

Druid Committer

In this session,

**Spatial index optimization and GIS query
support on [apache Druid using Lucene](#)**

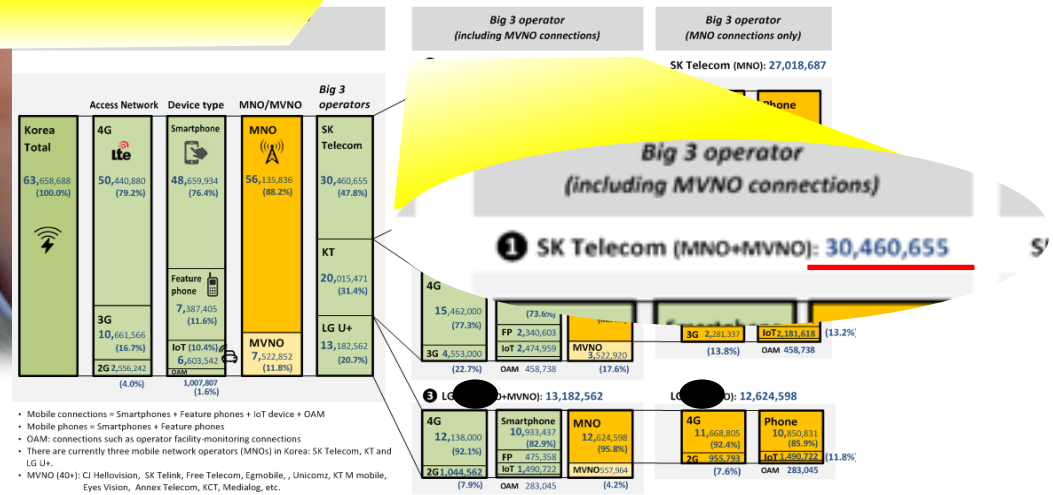


Powered by [metatron discovery](#)

SKT is the largest wireless carrier in South Korea



Mobile Connections in Korea in Q4 2017
63,658,688



- Mobile connections = Smartphones + Feature phones + IoT device + OAM
- Mobile phones = Smartphones + Feature phones
- OAM: connections such as operator facility-monitoring connections
- There are currently three mobile network operators (MNOs) in Korea: SK Telecom, KT and LG U+.
- MVNO (40+): CI Hellovision, SK Telink, Free Telecom, Egmobile, Unicoms, KT M mobile, Eyes Vision, Annex Telecom, KCT, Medialog, etc.

<https://www.netmanias.com/en/?m=attach&no=31849>

Service quality analysis powered by

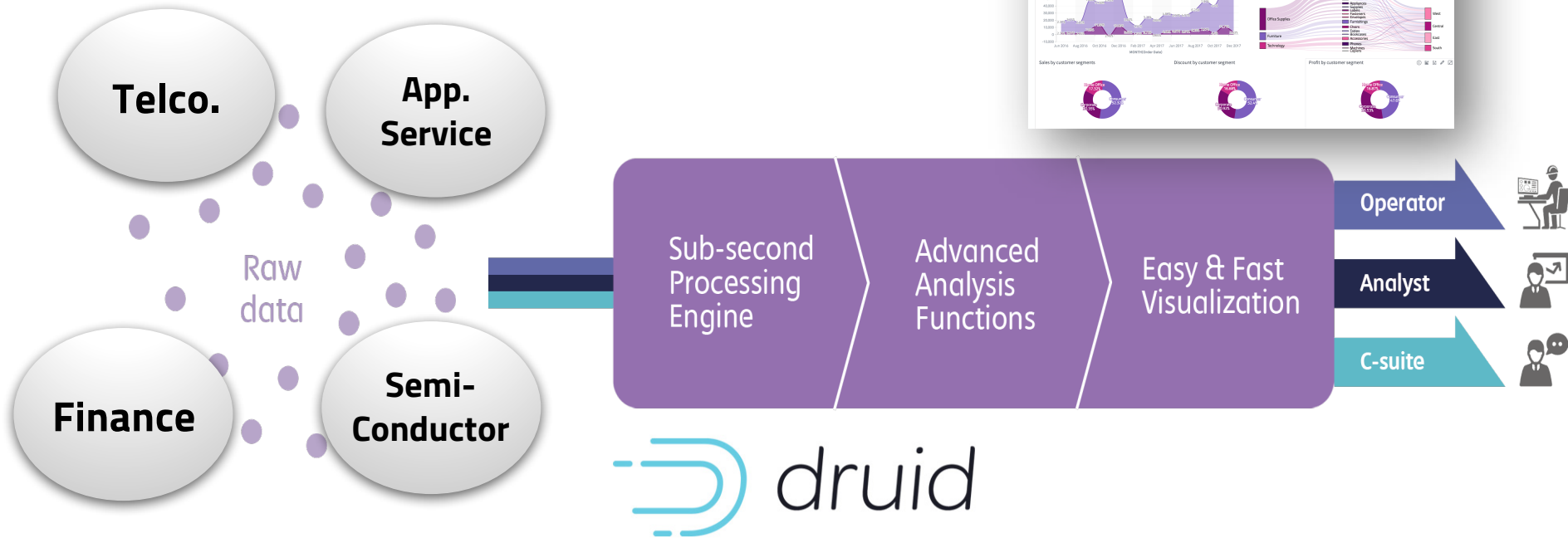


TANGO



metatron discovery

What is metatron discovery ?



More details >> Visit <https://metatron.app>

Telco. Quality Analysis Platform – TANGO DW



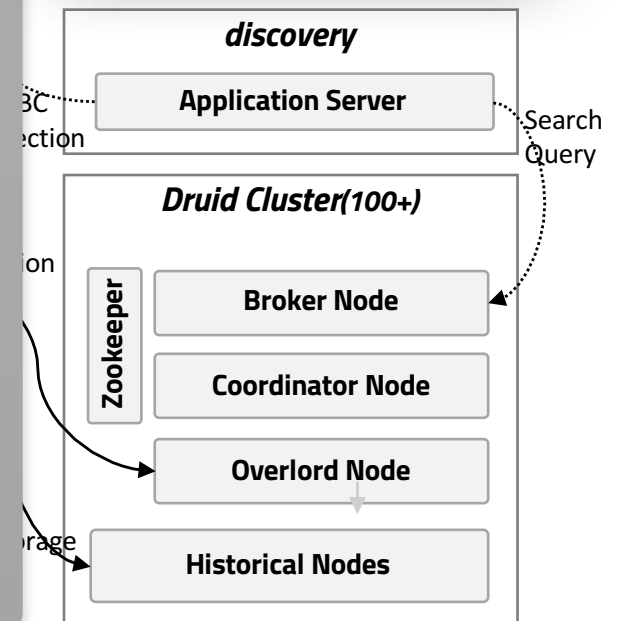
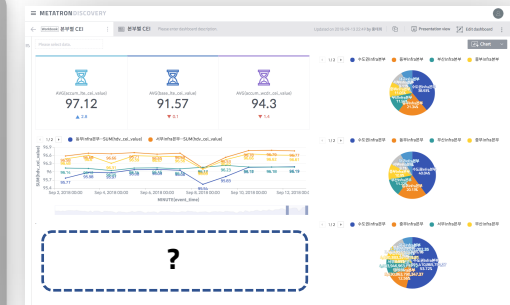
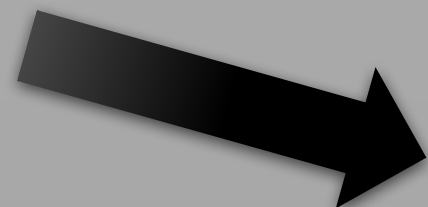
Source Systems

Collection & Integration

Data Warehouse

Analytics

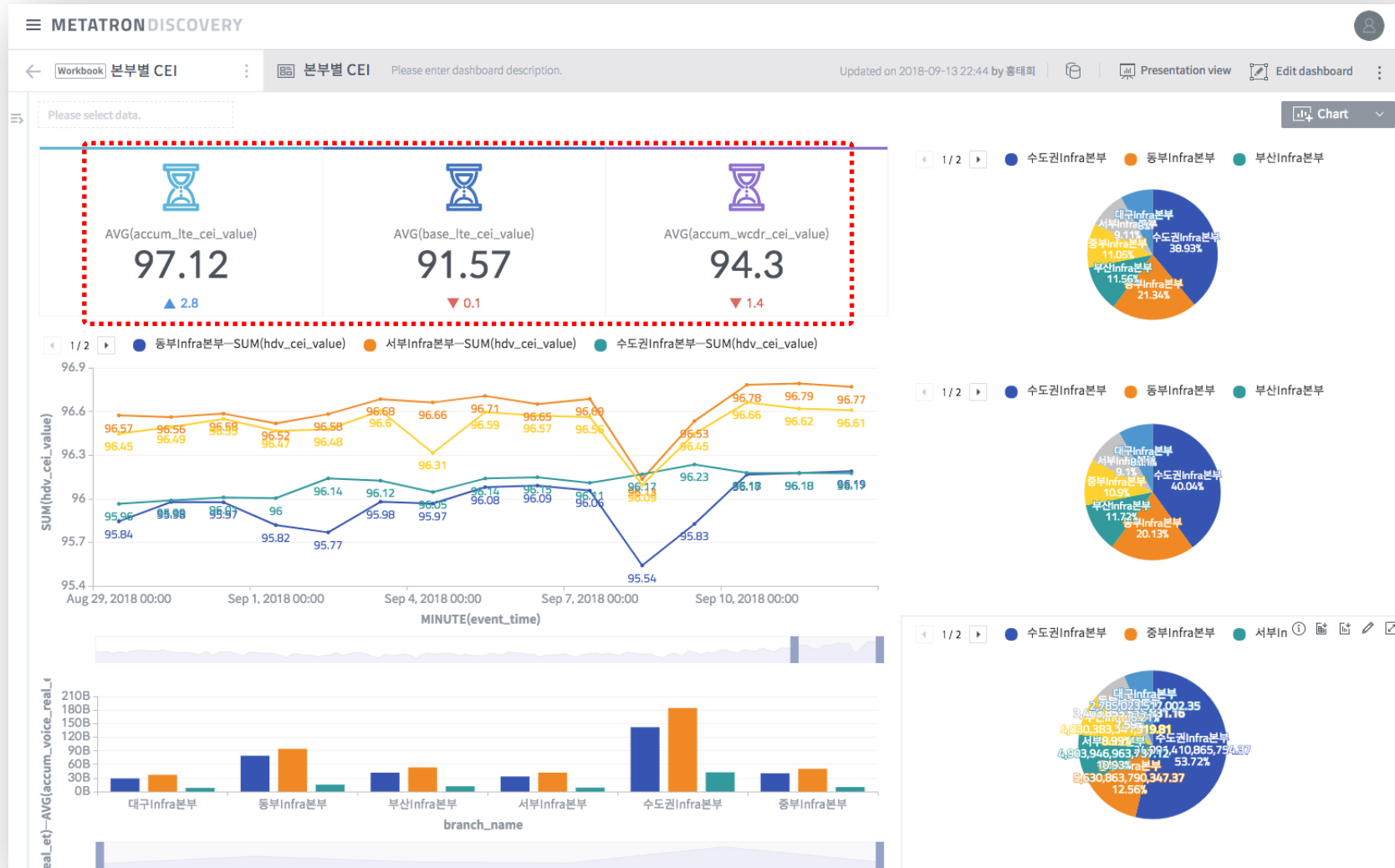
1000+ servers
60TB DATA/Day



Telco. Quality Analysis Platform – TANGO DW



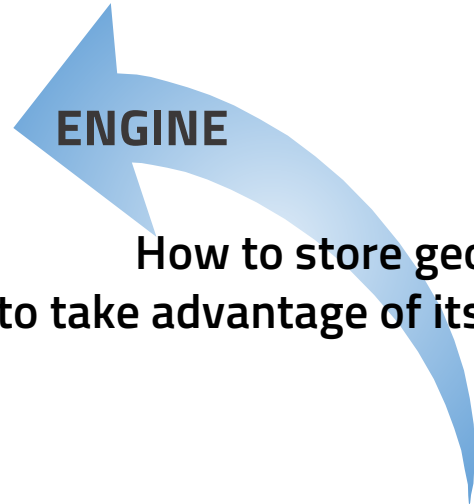
Telco. Quality Analysis Platform – TANGO DW



Geospatial analysis by metatron discovery



metatron Discovery



ENGINE

How to store geospatial data on Druid to take advantage of its performance and scalability



UI

How to visualize geospatial data in a handy way through user interface



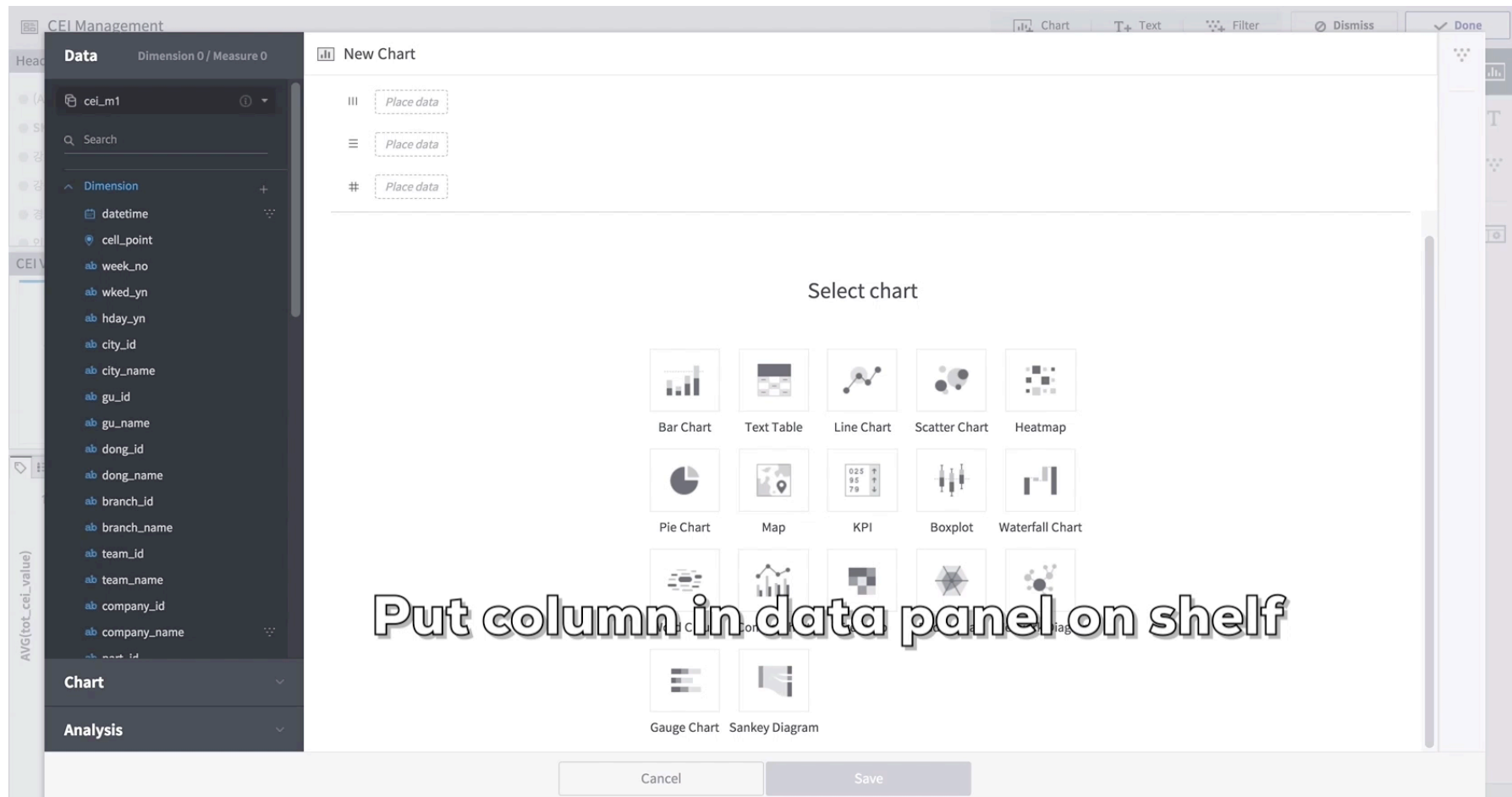
Domain-Specific Map Tools

Part 1. How to visualize geospatial data in metatron discovery

The screenshot displays the metatron discovery interface with a map visualization titled "Average CEI By Region". The interface is divided into several panels:

- Data Panel (Left):** Shows a list of dimensions and measures. The selected measure is "cei_m1". Dimensions listed include "datetime", "cell_point", "week_no", "wked_yn", "hday_yn", "city_id", "city_name", "gu_id", "gu_name", "dong_id", "dong_name", "branch_id", "branch_name", "team_id", "team_name", and "company_id".
- Map Panel (Center):** Displays a map of Seoul, South Korea, with regions colored according to the "Average CEI" measure. The map includes a legend and a toolbar with options like "shape", "ldong_nm", "cell_point", and "AVG | tot_cei_value".
- Layer Setting Panel (Right):** Provides configuration options for the visualization:
 - Layer Name:** Polygon Layer
 - Layer Type:** Polygon
 - Color:** Color by Measure (Please select)
 - Transparency:** 60
 - Size:** Size by none
 - Outline:** OFF

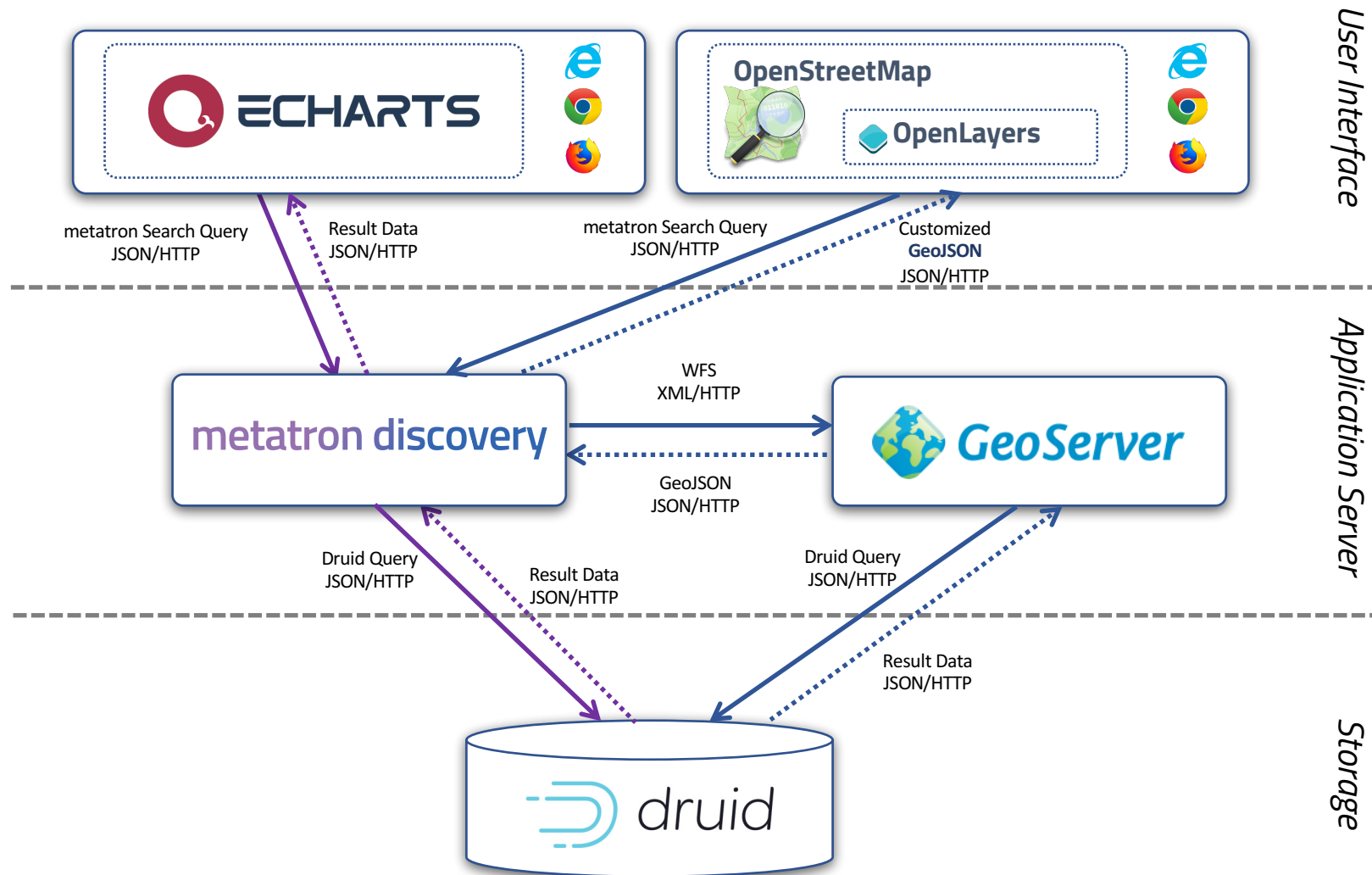
UX : Explore flow for default charts



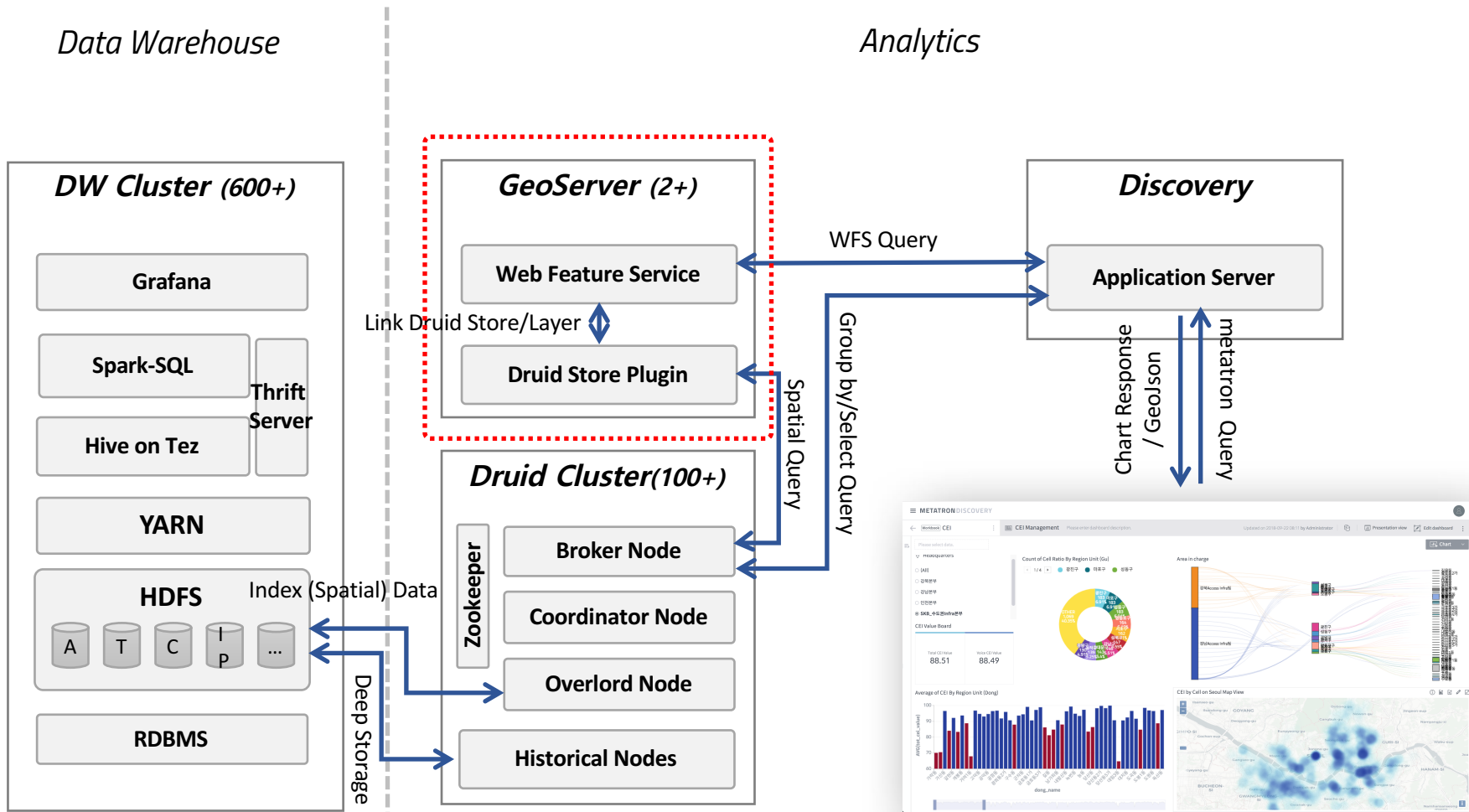
UX : Explore flow for map view

The screenshot displays a software interface for creating a map view. At the top, it shows 'New MapView' and 'Workbook > Dashboard'. Below this is a configuration bar with three layers: Layer 1 (GEO, Region), Layer 2 (GEO, Dimension, Measure A), and Layer 3 (GEO). A 'Data' panel on the left lists dimensions (Category, City, Country, Timestamp, Customer Name, Order ID, Sub Category, Point, Line, Polygon, UserDefined) and measures (Profit, Sales, MathField, Parameter). A 'Layer Setting' panel on the right allows for customizing the map's appearance, including Name, Type (Polygon, Heatmap, Tile), Color (with a color bar and 'Change Color Template' button), Custom (OFF), Transparency (None), Blur, and RAUIUS. A central map of the United States shows a heatmap and three overlaid layers: Layer 1 (Symbol Color: WEST, MIDDLE, EAST), Layer 2 (Line Color By Measure A: 50,000-60,000 to 0-10,000), and Layer 3 (Heatmap Color: 5,000-6,000 to 0-1,000). A blue dashed box highlights the configuration bar and Layer Setting panel. A blue arrow labeled 'Drag & Drop' points from the 'Point' dimension in the Data panel to the map. A 'New chart 1' label is positioned above the map.

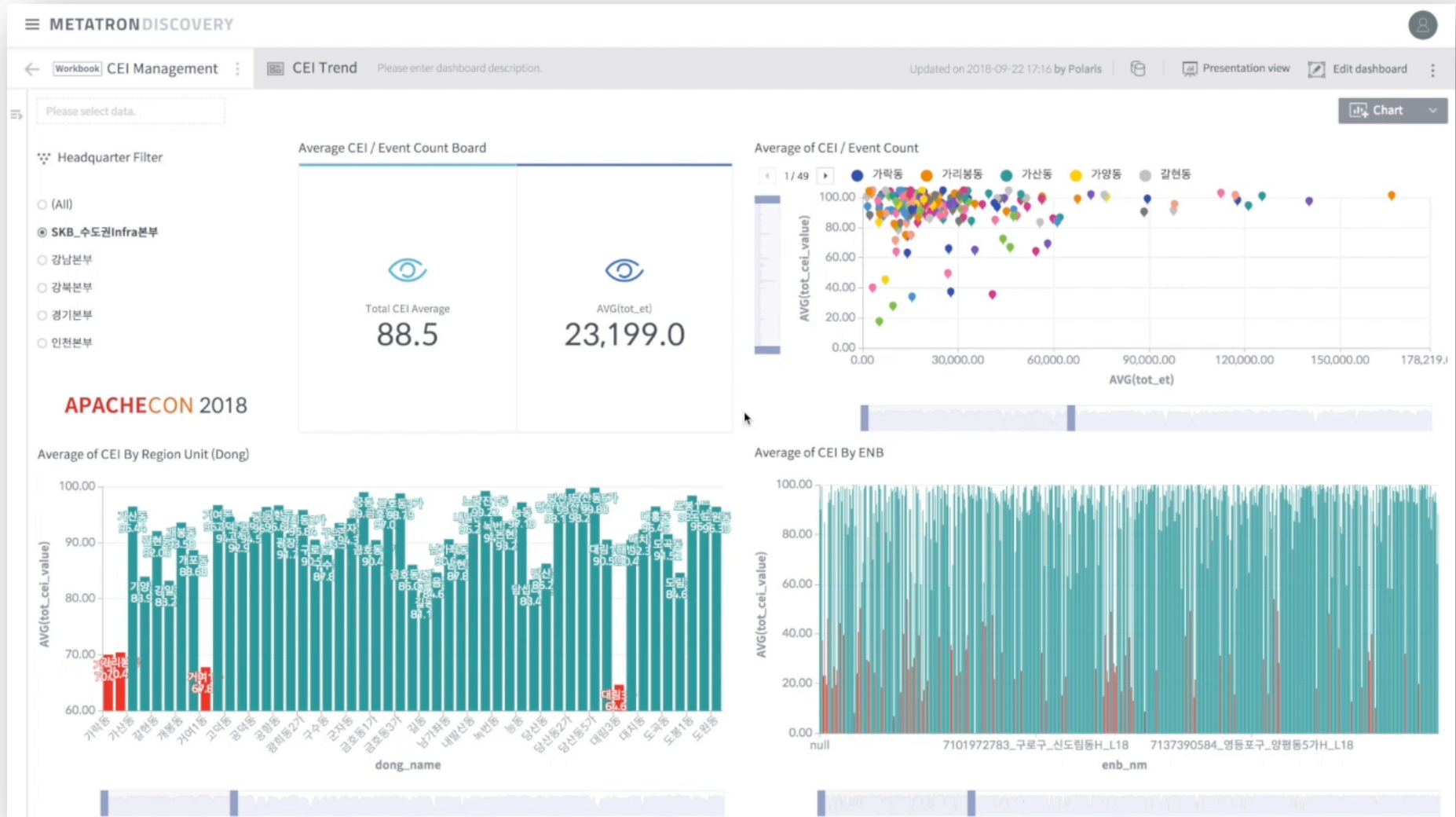
Interaction between layers/components



Analysis platform architecture for geo data



Use case : Customer experience analysis using map views



A long way to go



Join us,

The screenshot displays the GitHub repository page for `metatron-app/metatron-discovery`. The repository has 13 unwatched items, 53 stars, and 20 forks. It contains 73 issues, 0 pull requests, 0 projects, and 0 insights. The repository is licensed under Apache-2.0 and has 641 commits, 76 branches, and 3 releases. The repository is managed by 18 contributors.

The repository description is: "Powerful & Easy way for big data discovery <https://metatron.app>".


Topics include: `business-intelligence`, `big-data-analytics`, `apache-druid`, `self-service`, `druid`, `data-visualization`, `data-analytics`, `dashboard`, and `sql-editor`.

Recent commits include:

- kyungtaak Merge pull request #316 from metatron-app/3.0.3 (Latest commit 20ed9d8 a day ago)
- .github Create CONTRIBUTING.md (15 days ago)
- discovery-distribution Update version in the pom files to 3.0.3 (15 days ago)
- discovery-frontend Merge pull request #311 from metatron-app/#37-improve_grid_chart (a day ago)
- discovery-prep-parser #140 data preparation function minor changes (11 days ago)
- discovery-server Merge pull request #303 from metatron-app/#302-close_db_connection (a day ago)
- .gitignore #1 set version info into LNB using ENV (25 days ago)
- LICENSE update license/readme file. (a month ago)
- NOTICE initial source code commit. (a month ago)
- README.md zeppelin spelling error (16 days ago)
- pom.xml Update version in the pom files to 3.0.3 (15 days ago)

The README content includes the following sections:

Metatron Discovery



Metatron Discovery is a self-service solution for big data discovery. To learn more about metatron discovery, visit our web site <https://metatron.app>

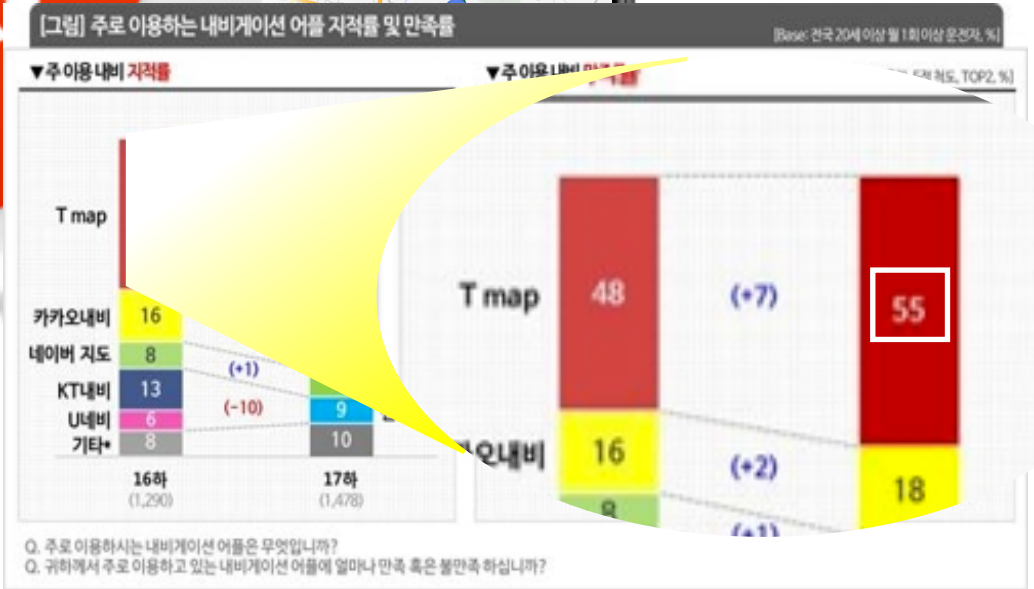
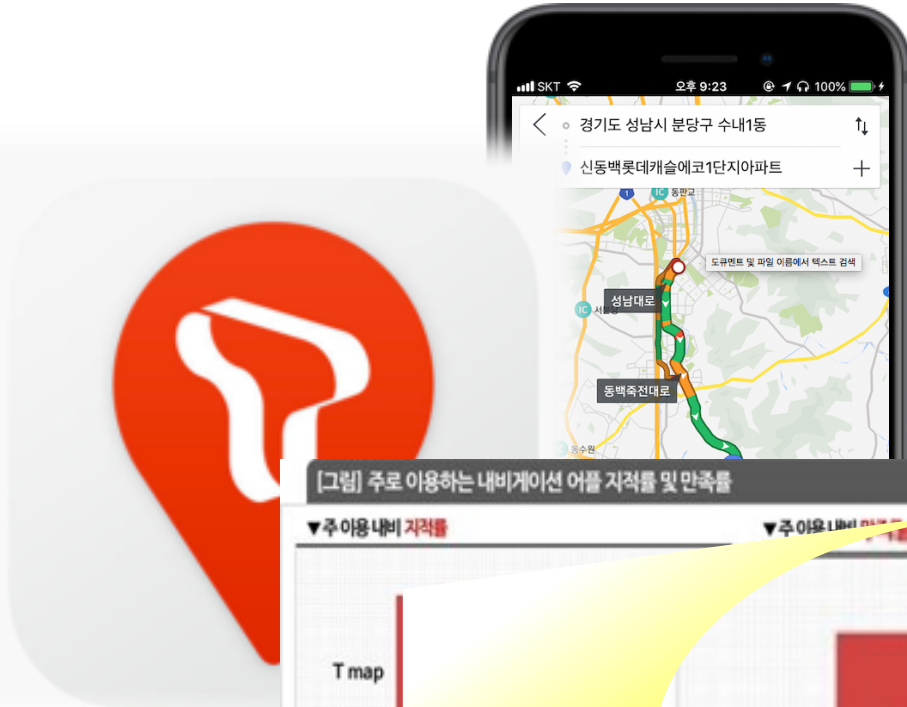
Strengths

1. Powered by [Apache Druid](#), metatron can process huge size of data super fast.
2. A single unified product for field users enabling data analytics.
3. Intuitive web UI for creating dashboards with various types of charts.

Next,

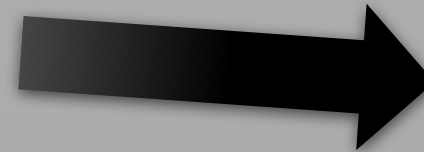


No.1 navigation service by No. 1 mobile operator

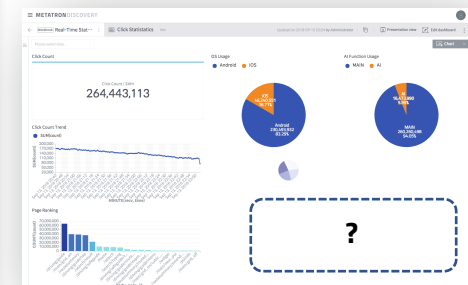
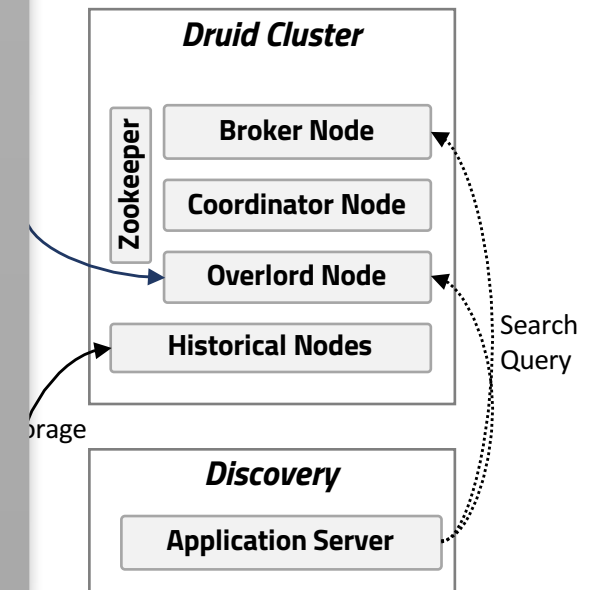


T-Map Quality Analysis Platform

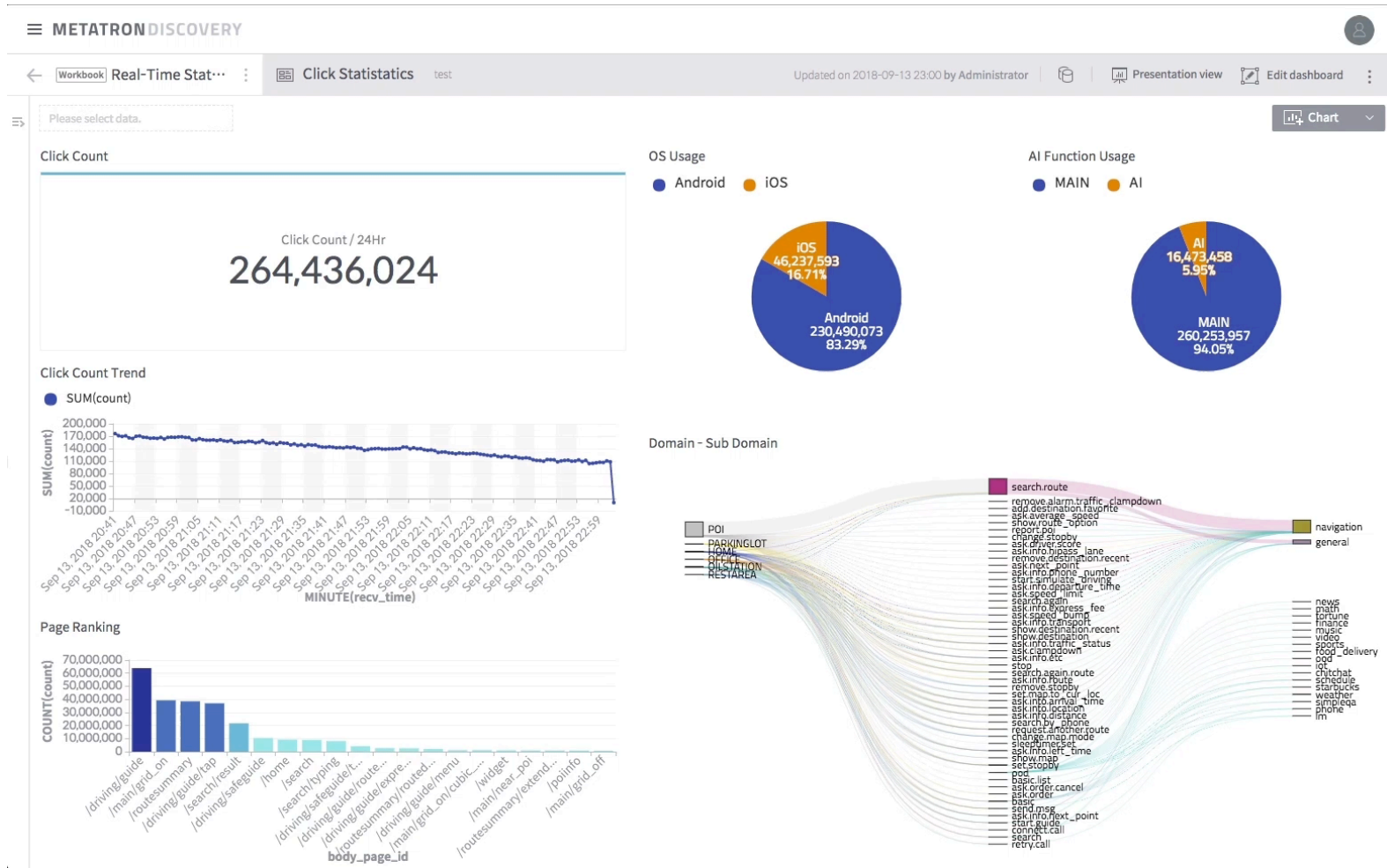
6TB/Day
On Real-Time



Analytics



T-Map Quality Analysis Platform



Geospatial analysis in metatron discovery

Geo Data Ingestion



Data Exploration/Analysis with geo

