Overview
BIG DATA Computation

Labs247
Technology in motion

Telkom University

TÜVRheinland®
Precisely Right.

What is Big Data?

- It’s a Buzz Phrase. No Single Definition
- Big data is a term for data sets that are so large or complex that traditional data processing application software is inadequate to deal with them.
- Challenges include capture, storage, analysis, data curation, search, sharing, transfer, visualization, querying, updating and information privacy.
- Now, refer to Big Data Analytics

The Rise of Big Data

- Technology Growth
- Internet Adoption
- People Behaviour
- Digitize Everything
- Competition

Big Data and AI Landscape

Matt Turck
VC at FirstMark Capital
mattturck.com/bigdata2019

INFRASTRUCTURE

Infrastructure

Hadoop on Prem, Hadoop on Cloud, Streaming/In Memory, NoSQL Databases, NewSQL Databases, Graph DBs, MPP DBs, Cloud EDW, Data Transformation, Data Integration, Data Governance, Mgmt/Monitoring, Storage, Cluster Svcs, App Dev, Crowd Sourcing, Hardware, GPU DBs

ANALYTICS

Analytics

Data Analytics Platforms, Data Science Platforms, BI Platforms, Visualization, Machine Learning, Computer Vision, Horizontal AI, Speech & NLP, Search, Log Analytics, Social Analytics, Web/Mobile/Commerce Analytics

APPLICATIONS – ENTERPRISE

Application Enterprise

Sales - Marketing B2B - Marketing B2C - Customer Service - Human Capital - Legal - Finance - Enterprise Productivity - Back Office Automation - Security

APPLICATIONS – INDUSTRY

Application Industry

Advertising - Education - Government
Finance - Real Estate - Insurance - Healthcare
Life Science - Transportation - Agriculture
Commerce - etc

CROSS-INFRASTRUCTURE/ANALYTICS

Cross Infrastructure/Analytics

OPEN SOURCE

Open Source

Frameworks, Query/Data Flow, Data Access, Coordination, Streaming, Stat Tools, AI/ML/DL, Search, Logging & Monitoring, Visualization, Collaboration, Security

DATA SOURCES & APIS

Data Source & APIS

Health, IoT, Financial & Economic Data, Air/Space/Sea, People, Location Intelligence, Other

DATA RESOURCES

Data Source

Open Source Technology

- Most of big data component is open source
- We can download the code, use and modify freely
- Require adequate human resources
- Lots of choices

What is Hadoop?

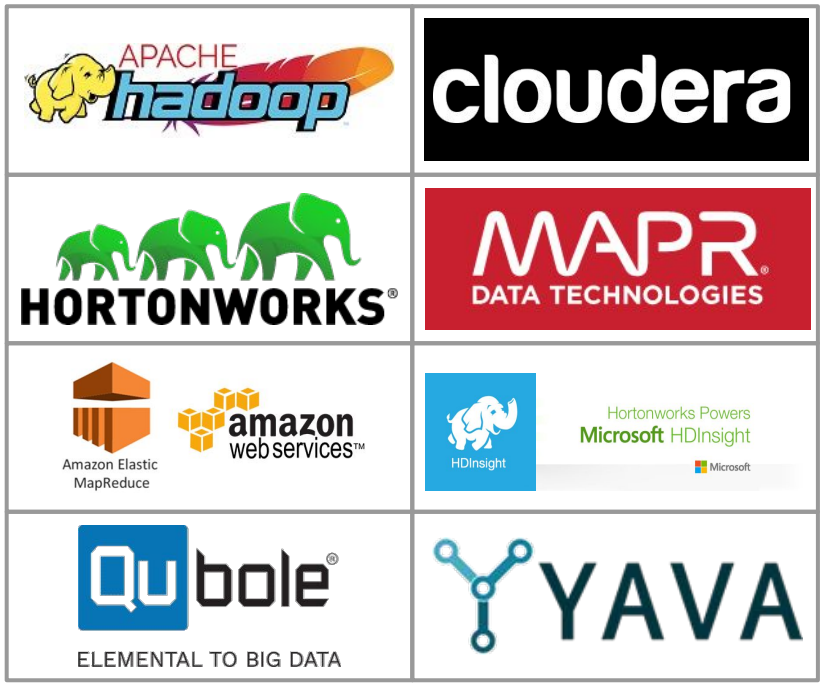
- Open Source Platform for data management
- Combination of distributed storage and distributed processing
- Computer cluster built from commodity hardware
- Framework written in java programming
- Offering scalability and high performance
- The name Hadoop is not an acronym; Doug Cutting named it after his son's toy elephant

History of Hadoop

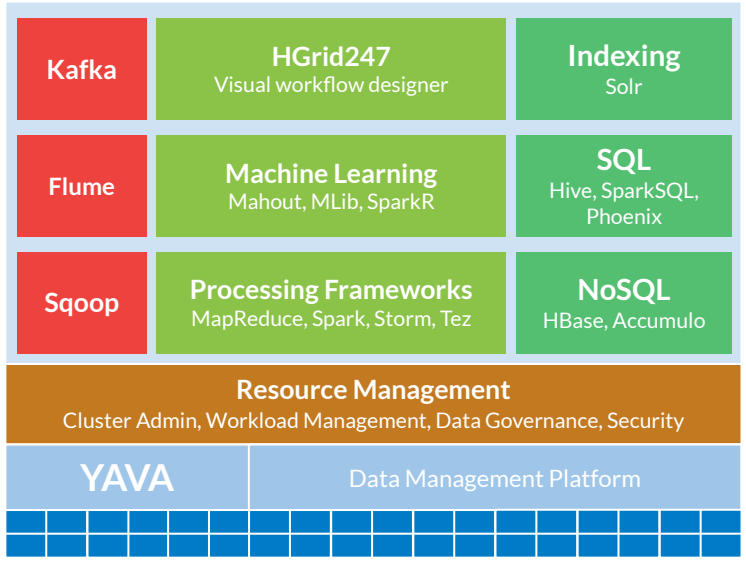
- Mike Cafarella and Doug Cutting started the Nutch project in 2002
- In 2003, Google published Google File System paper, that described the architecture of Google's distributed file system
- By adopting GFS, Nutch Distributed File System (NDFS) began to be implemented on the Nutch project in 2004
- In 2004, Google published the paper that introduced MapReduce to the world
- Early in 2005, the Nutch developers had a working MapReduce implementation in Nutch
- In February 2006 they moved out of Nutch to form an independent subproject of Lucene called Hadoop
- April 2006 – Hadoop 0.1.0 was released

Disruptive Technology

- Open source – zero license
- Proven by big internet company
- Active community
- Fast adoption



YAVA Data Management Platform



All in one data management platform
Programming/Scripting :

- Java, Python, Scala, R
- SQL
- HGrid247 - Visual Designer

For further info : **yava.labs247.id**

Big data and artificial intelligence platform based on open source component. It is designed to make organization easier to implement big data.

Use Case

Archival and Storage

- Retain years of data
- Retain intermediate format

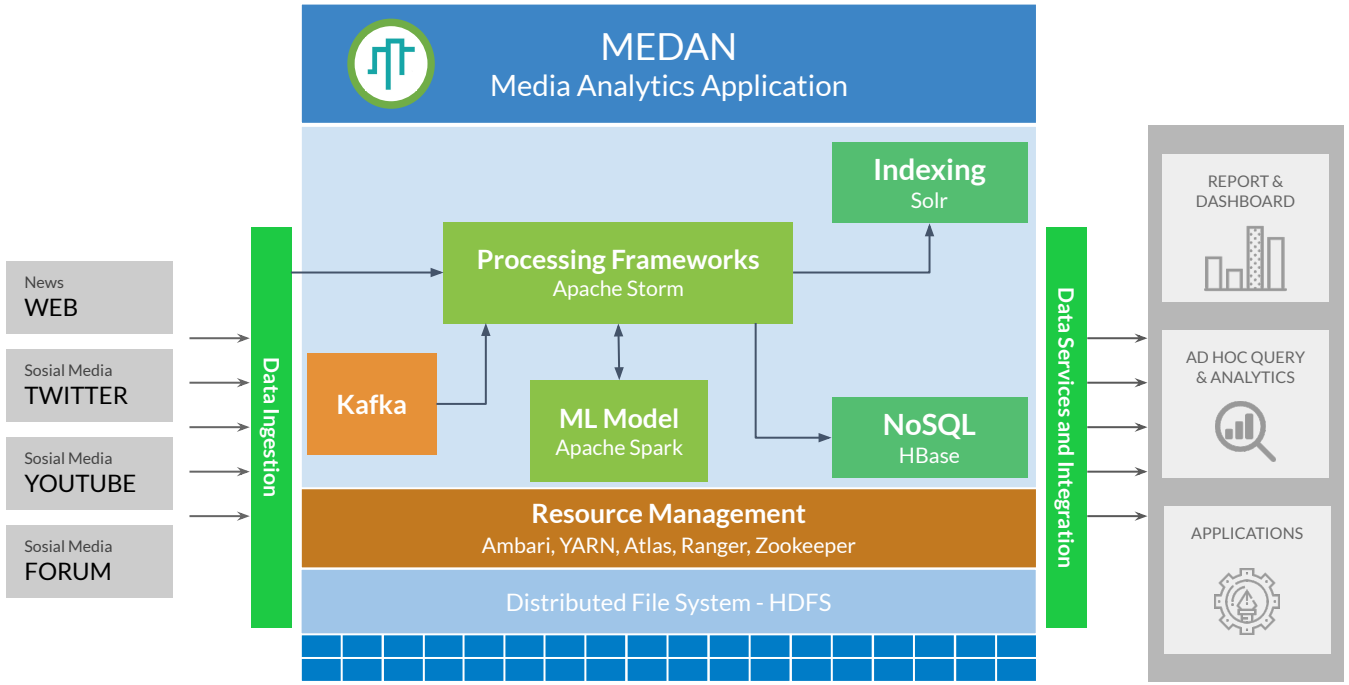
Transformation

- Map inputs and outputs where needed
- Turn unstructured data into structured at runtime

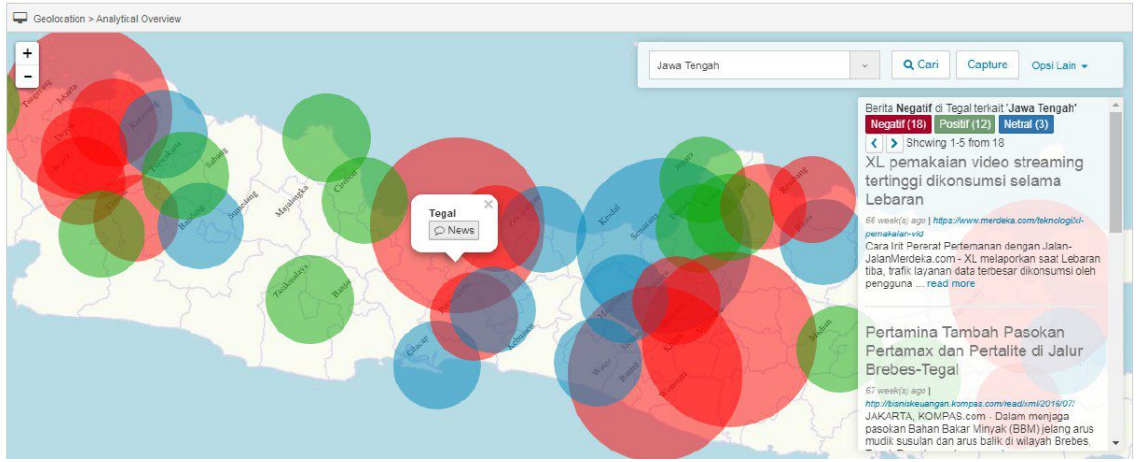
Analysis

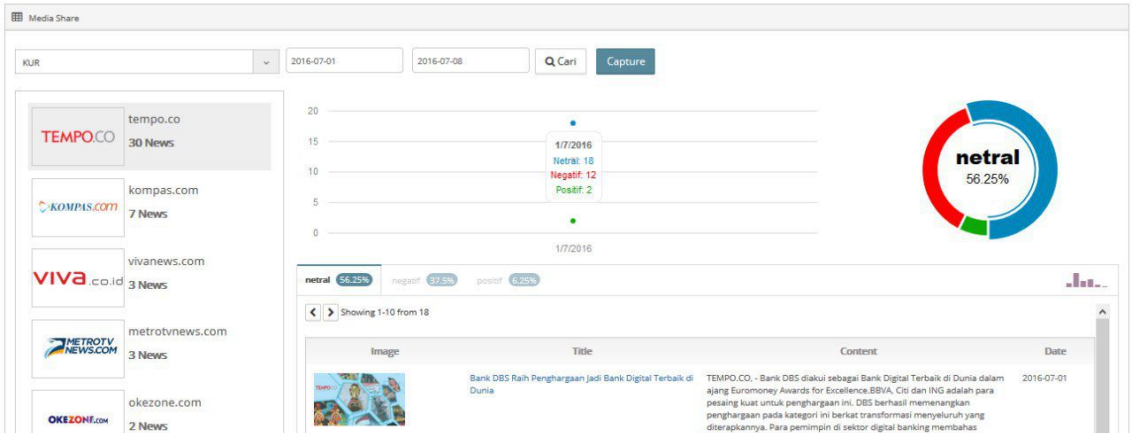
- Explore data in-place
- Execute arbitrary code

Use Case - Media Analytics



Use Case - Media Analytics





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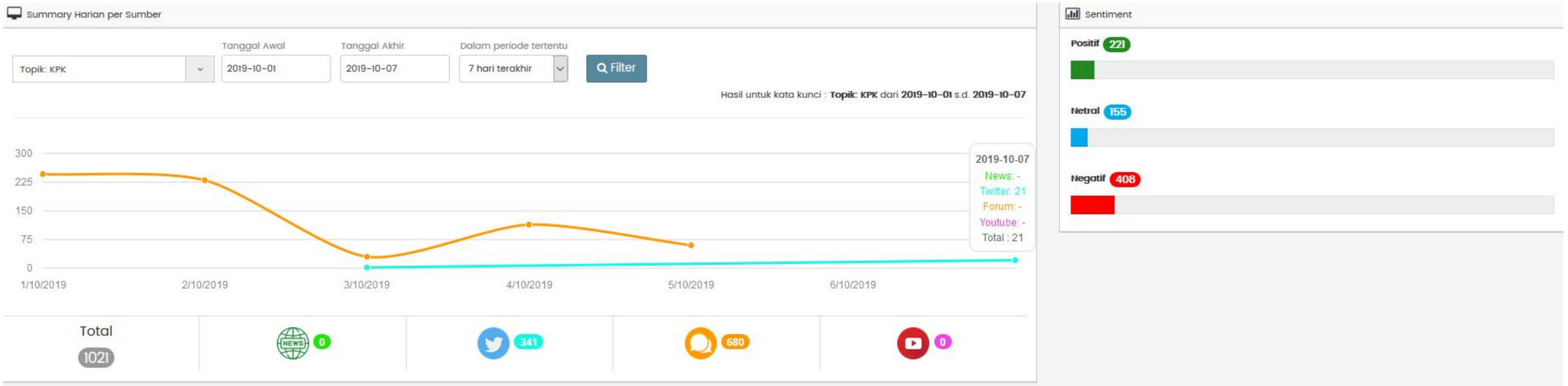

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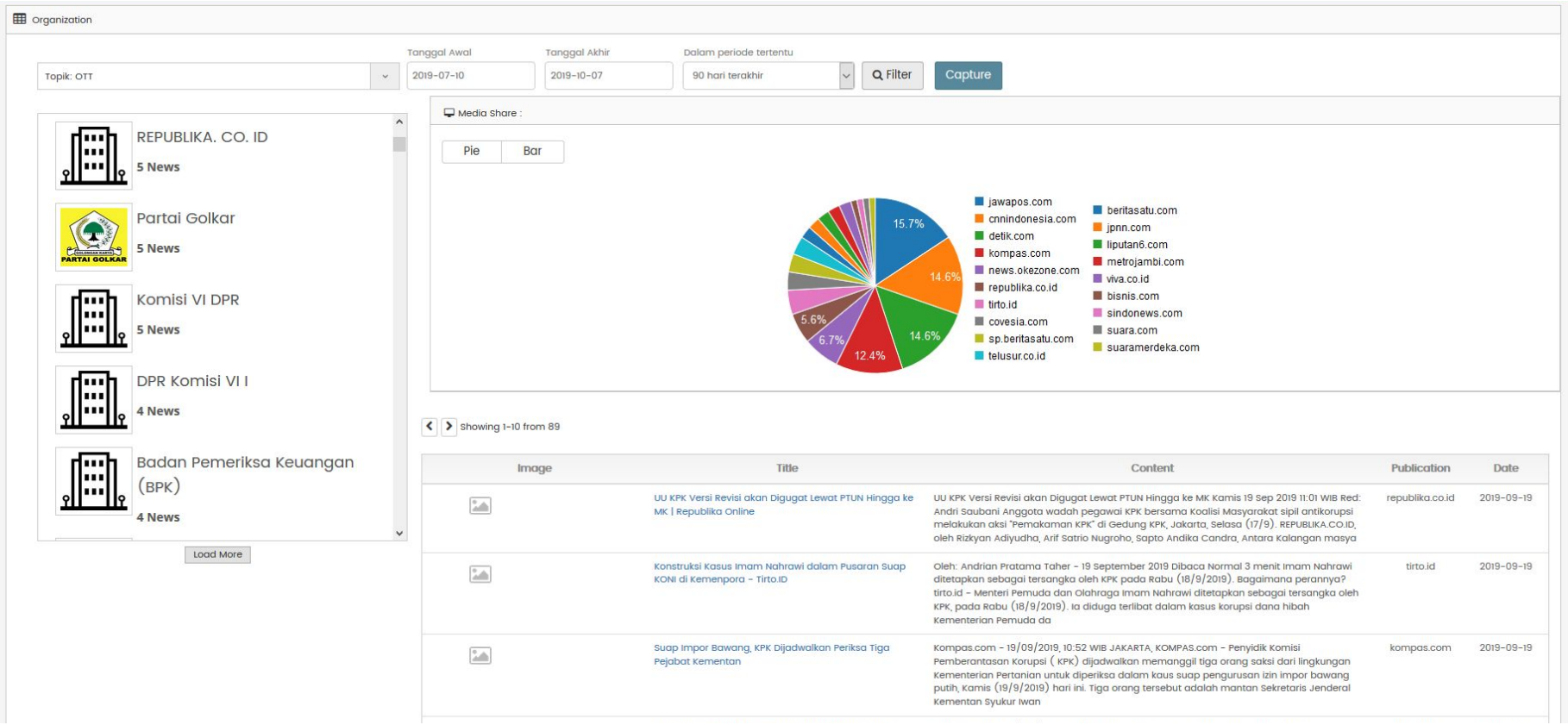
Use Case - Media Analytics



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