

10. HUAWEI CLOUD Enterprise Intelligence Application Platform

10.1 Overview of HUAWEI CLOUD EI

Rodolfo Sabino

18 Setembro, 2020

Departamento de de Computação



Disclaimer

The following content is heavily based on HCIA-AI Course material by Huawei Technologies Co., Ltd., authored by Zhang Luxiao and Yuan Meng. Distribution is not allowed.



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- Overview of Huawei
- Huawei Cloud EI (Enterprise Intelligence) Products and Services



Overview of Huawei



Overview of Huawei



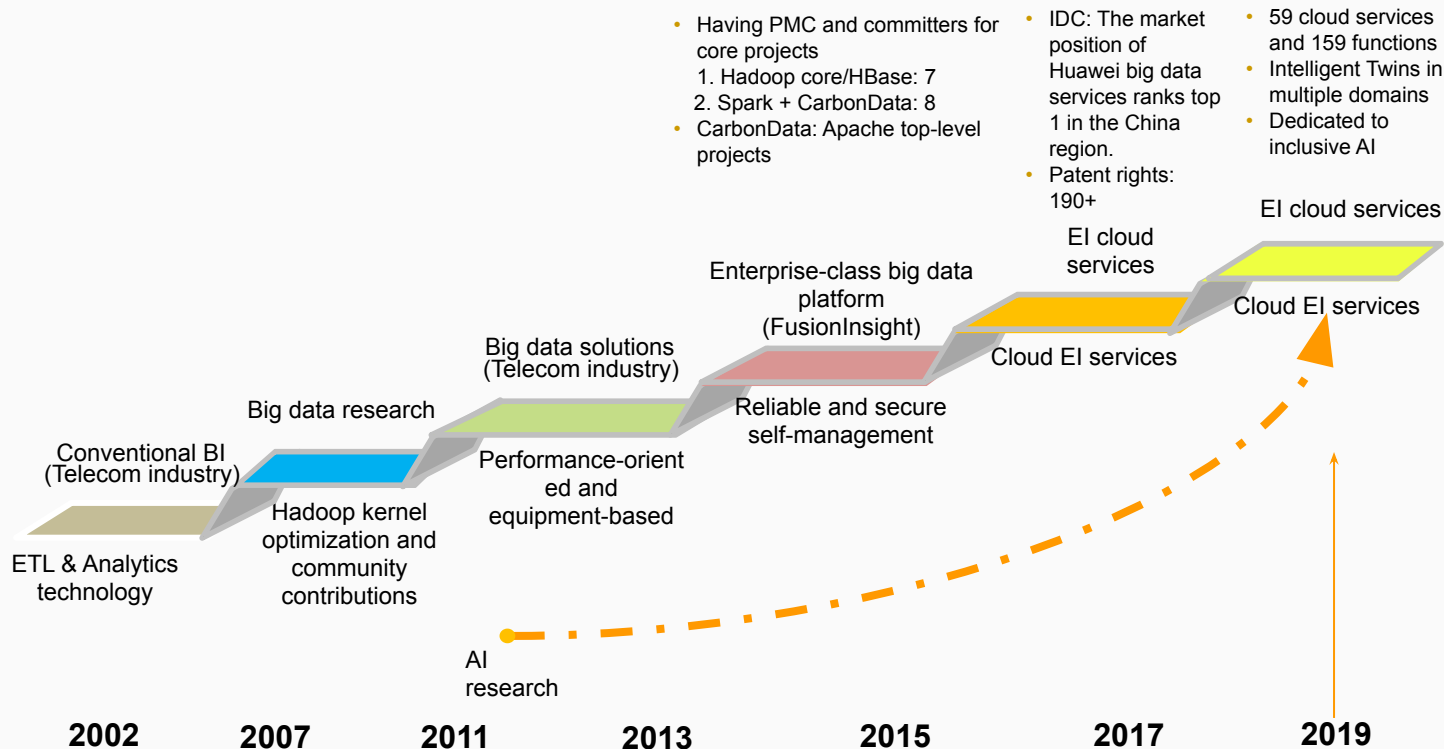
Overview of Huawei

Products and services

- Carrier Network Business Group
 - Provides wireless and fixed networks, carrier software, etc.
- Enterprise Business Group
 - Data center and data storage platforms, etc.
- Consumer Business Group
 - Mobile phones, tablets, wearables, PCs, smart devices, etc.



HUAWEI CLOUD EI Development History



Cloud EI platform



Cloud EI platform

- Services
 - Data processing (Mapreduce service)
 - Data storage (Warehouse service)
 - Cloud search
 - Graph Engine



Cloud EI platform

- Products

- Big Data
- Essential Platform
- Conversational Bot
- Natural Language Processing
- Automatic Speech
- Data Ingestion Service
- Video Analytics
- Image Recognition
- Content Moderation
- Image Search
- Face and Human Recognition
- Optical Character Recognition
- EI Intelligent Twins



Cloud EI platform

- Services
 - Data processing (Mapreduce service)
 - Data storage (Warehouse service)
 - Cloud search
 - Graph Engine



Cloud EI :: Services :: Graph Engine

Graph Engine Service (GES) facilitates querying and analysis of graph-structure data based on various relationships. It is specifically suited for scenarios requiring analysis of rich relationship data, including social relationship analysis, recommendations, precision marketing, public opinions and social listening, information communication, and anti-fraud.

- **Application Scenarios**

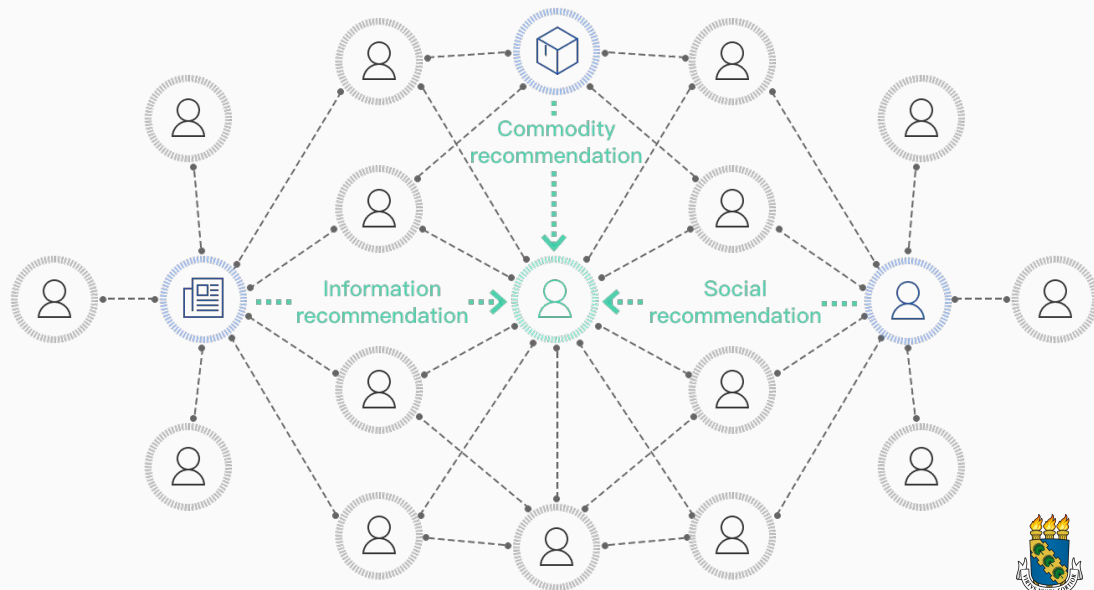
- Internet
- Knowledge Graph
- Financial Risk Control
- Urban Industry
- Enterprise IT



Cloud EI :: Services :: Graph Engine

- Application Scenarios

- Internet Mining valuable information from large and complex social networks.
- Knowledge Graph
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Cloud EI :: Services :: Graph Engine

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- Friend, Product, and Information Recommendation

- Provides personalized and precise **recommendations** based on friend relationships, user profiles, behavior similarities, product similarities, and propagation paths.

- User Grouping

- **Groups** users based on their profiles, behavior **similarities**, or **relationships** to facilitate precise user group management.



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- Abnormal Behavior Analysis

- Analyzes user **behavior**, partner relationships, and account/IP login information to detect abnormal behavior, minimizing losses due to fraud.

- Public Opinion and Social Listening

- **Identifies** opinion leaders and hot topics by analyzing propagation paths and relationships, enhancing the quality of public opinion analysis.



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GES-based knowledge graphs integrate various kinds of heterogeneous data, enabling larger graph scales and higher performance.



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- Massive Storage
 - **Integrates and stores** billions of heterogeneous data points as vertices and edges in graphs.
- Quick Correlation Query
 - Optimized to process thousands of **graph queries**, returning accurate results within seconds.



Cloud EI :: Services :: Graph Engine

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- Knowledge Classification
 - Combines similar knowledge points based on graph-based analysis and computing to implement knowledge disambiguation.
- Learning Path Identification and Recommendation
 - Identifies and recommends learning paths based on learning relationships between data points.

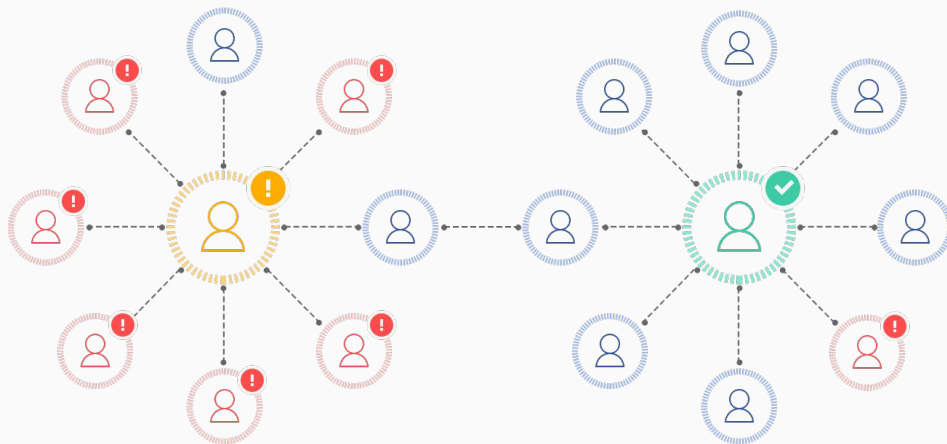


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GES graph queries help detect fraudulent user behavior, minimizing potential financial risks.



Cloud EI :: Services :: Graph Engine

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- Real-Time Fraud Detection
 - Identifies users who share the same personal information such as email addresses or IP addresses and highlights cases of known or potential fraud.
- Group Detection
 - Groups users based on interpersonal relationship analysis to identify abnormal groups.



Cloud EI :: Services :: Graph Engine

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- Missing Person Tracking
 - Tracks missing people based on various **relationships**.

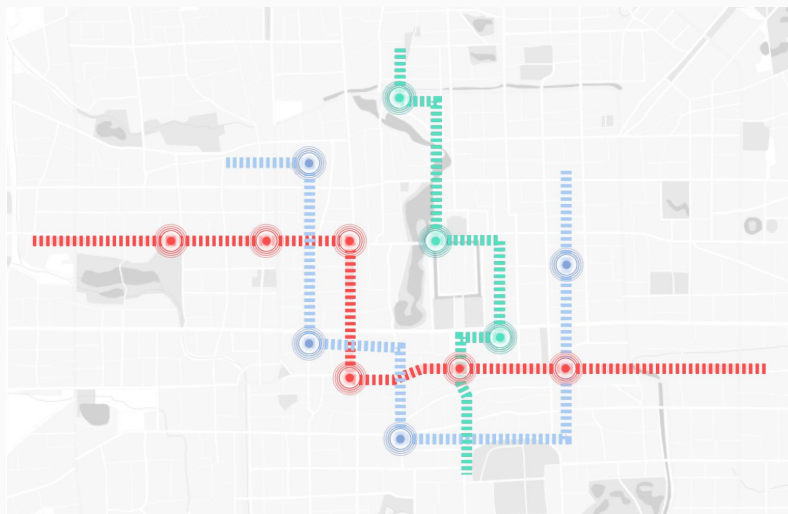


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Helps customers adjust the pressure and balance loads of urban roads or pipelines (such as water, gas, power, and oil pipelines) to facilitate refined control over traffic networks and pipelines.



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- Pipeline Pressure Adjustment

- Helps **analyze traffic pressure** of the entire pipeline network based on the real-time pipeline monitoring data.

- Urban Road Network Control

- **Analyzes traffic congestion** of the entire urban road network according to the traffic, road network, and intersection monitoring information to **improve traffic light control**.

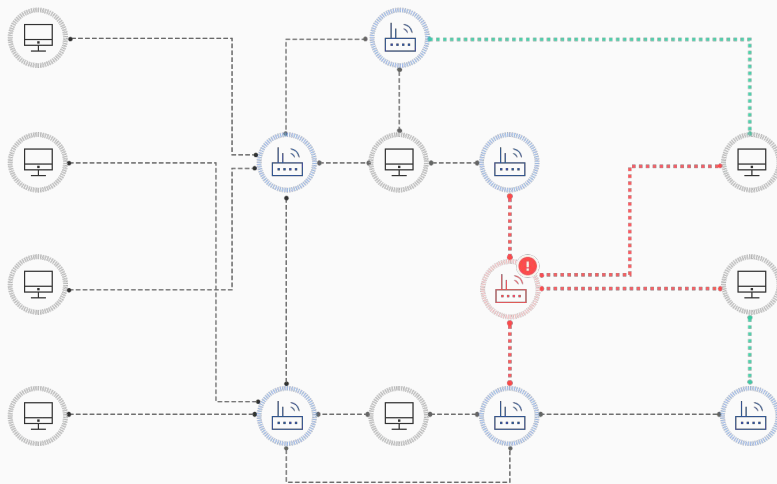


Cloud EI :: Services :: Graph Engine

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Provides intelligent device monitoring and management for your entire network and IT infrastructure.



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- Network Planning

- Facilitates network planning by **determining impacts** of faulty nodes, and recommends backup routers for nodes bearing heavy loads.

- Fault Cause Analysis

- Quickly locates the root cause of any network or infrastructure fault.



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- IT Infrastructure Management
 - Provides visual relationships of network devices, including device and resource statuses, for more efficient O&M.

