

# Design and Implementation of Metadata Management Model in Cloud Computing Business Intelligence Platform

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**Abstract:** With the development of information technology, the data of enterprises continue to increase, and the business logic becomes more and more complex. The existing BI system is difficult to meet the performance requirements of enterprises. If the demand determines the market, if they are close to the market demand, BI system can develop rapidly. By combining the advantages of Bi and AAS, we can reduce the comprehensive development of bill PAAS platform, reduce the difficulty of BI system development, and improve the performance of Bi processing. But all is opposition and unity. At present, the bill PAAS platform also has some problems to be solved. For example, due to the different metadata definitions of the respective premiere tools, the lack of standardized unified mechanism of the premiere when unifying the pass platform functions will bring obstacles to the developers' business, and sometimes code will appear in the tool part of the envelope part.

## 1. Introduction

With the continuous development of information technology, enterprise database is more and more complex, and the scale of user data is larger and larger. How to extract valuable information from a large number of data, and carry out business analysis to meet the needs of users and provide support for business decisions made by enterprises is more important. Business intelligence will explain a series of concepts and methods to support business decisions through the so-called basic support system of business intelligence. Business information is a tool to extract knowledge from existing enterprise data to support business decisions. The core is useful data extraction. That is to say, the data is extracted cleanly, transformed, processed and stored on the data satellite, and the final analysis results are combined with the manager. Data processing, data transmission, data mining, data analysis, data analysis, data display, etc[1].

## 2. Computing Business Intelligence Platform

### 2.1. Platform Introduction

From the business level, quickly grasp the overall logic of BL PAA platform, build objectives on the platform, and briefly introduce the platform from three aspects: main business and customer base. First, the construction goal of the platform platform is to study Intel, cloud computing business intelligence analysis technology, develop application services, operation, support maintenance, support, wood prawood Planning II[2]. The main business of the platform is external application development and application. Finally, the client base of the platform can be roughly divided into three types: platform manager, lease manager and leaser.

### 2.2. Metadata Standard

The concept of data was introduced in the last section, and we learned to run on all platforms.

The only way to provide a centralized global data view is to centralize the data view. The composition, transformation and processing of platform data can effectively manage data. At present, the metadata of BL PAAS platform, the package of the whole platform, the data management platform of the development tool package of ETL tool platform of Kaifeng government, which is the specific tool platform of tamodel, has several problems when connecting: the tendency of data confusion, the sex that cannot be maintained, and the problem of information island affect the efficiency of decision-making. Data warehouse access efficiency[3].

### 2.3. Metadata

The so-called "prototype" refers to the object of metadata [2] or the model of relevant data. Metamodels production, even in the best case, is difficult to achieve. Because considering the main types of metadata stored, how to make it is possible to create many problems. In this festival, we will introduce two methods, one is metadata model, the other is traditional relational model and the other is common model.

Metadata model is a physical database model that stores all kinds of data. Unlike other models, prototypes include business methods and rules for managing data in system [4]. In the object mode, the number of entities is fixed, and the relationship between entity information and entities can be obtained through the overall structure. The overall structure of the information to be represented by the system is stored in the metadata. Moreover, it also provides the flexibility of storing storage information.

## 3. Simulation Metadata

According to the functional structure of the platform, each part separates the virtual responsibility from the platform. Process model, organization prototype, UI prototype, Development Institute model, service institute model. As shown in the picture.

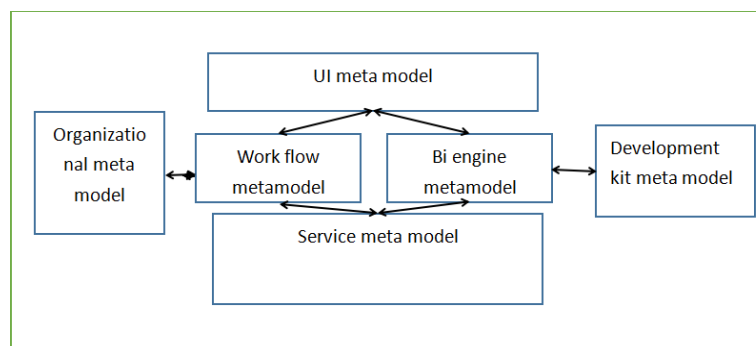


Figure 1 Element model system

Each circle design idea. This article includes Bi engine simulation, workflow model, organization prototype, UI prototype, model, UI prototype. Use UML taxonomy to describe Bi engine model and working class prototype. The metadata model and UI metadata model will be introduced separately in the next chapter for detailed input in Er curve[5].

## 4. Metadata Classification

The complete metadata system is horizontal and vertical analysis [6]. From the perspective of subdivision level (that is, from the perspective of metadata classification), the metadata of BL - PAAS platform, business metadata and management metadata can be divided into three kinds of data.

### 4.1. Technical Metadata

Technical data is the data that BL PAA platform describes concepts, relationships and rules in the technical field. It mainly includes the data structure and the feature description of data

processing F 2. When the BL PAA platform realizes the function module, the technical data includes all the technical related data. Data processing links such as BI application development, database storage, file storage, data source interface developed by the platform and front display will be published. The metadata type of metadata model is technical data. The following details are not repeated here.

#### **4.2. Business Metadata**

Business data, business terms, information classification, index definition T 2 and other business rule information mainly focus on the concept of business domain name in data analysis system, the data relationship and rules described. Its main function is to provide system support to commercial users and improve the system easily. The original business data of BL PAAS mainly refers to the business concept, business logic and business flow of the platform[7].

To deepen business data. The role of business data is that it is necessary for China to set up a customer firm for intelligent products according to the tenants supported by such BT PAA platform. This is support for various hardware waivers. Formic acid (other templates, platform hydraulics, software supported platforms, such as tomcat, mysql, Hadoop, ETL), etc. When China launches intelligent product a on BL PAA platform, IBM can use the intelligent product through the open platform interface. It is also the Chinese mobile phone developer bapaa platform supporting smart products B and C, C can promote. For this matter, the business users of BL PAAS platform, China Mobile, IBM and China mobile developers can understand the business process and business logic of the platform quickly.

#### **4.3. Metadata Management**

Management data is the data that describes the relevant concepts, relations and rules in the management field of the centralized data analysis system. Including personnel responsibilities, work responsibilities and management procedures [2]. After introducing the existing platform, the customer base of black - paaas can be divided into three types: platform management, lessor management and lessor developer. The rights and responsibilities of these three roles in the platform structure are mainly the platform management and the portals exposed in the platform.

### **5. Metadata Management**

Metadata management is installed in MVC design mode and based on SSH framework. HTML + CSS + jQuery technology is used in the front user interface. Here, the background settings of each functional module are described as the center.

#### **5.1. Metadata Display**

Metadata view includes two modules: application view and Bi part view. The meaning of them to the database information of all programs in the database, and the components of the opening character display the components of all data information in the database.

#### **5.2. Display Application**

Metadata manager, click the application that appears on the interface to view the names of all the applications in the database that are separated by the category names in the table. Click an application name to display the content of the application metadata. The type ID of the application name is obtained, and the information on the query object definition appears on the interface. Then ask for the attribute data according to the different ID on the information interface. Figure 4-6 shows the content of the application data of the report application[8].

#### **5.3. Attribute Management**

Attribute management means platform attribute data management. Actually change the list of add, delete, attribute definitions.

#### **5.4. Level Attribute Related Management**

The difference between the management attributes and the previous two functional modules is that through the class and attribute selection of the basic platform of semi additional attributes (voice), the two combine to win over the two anti attribute relationship. Add new data to the template list.

### **5.5. Metadata Collection**

Metadata exchange takes the content of attribute metadata and specific object data as the corresponding folder exchange. The basic information of the object definition object of the database is the opposite ID, the English name object, the Chinese name of the object, the attribute of the object object description object, and the actual data record of the record, which can be used, such as the object ID (ID attribute and attribute value). The value of an object specific property.

If you press the space of the database in the metadata management interface, the definition of the target in the database will display the names of all targets. Select the objects to be exchanged, enter the location and file name you want to exchange, and select the transfer form (2 txt and XML), metadata exchange. Cover process: to click the exported object, the object can query the ID and attribute attributes according to the ID object instance desktop, and obtain the attribute related information according to the desktop defined by the attribute attributes, and finally export [basic information of the object, basic information of attribute value, basic information of attribute display file, basic information and attribute identification in the creation process of attribute identification file[9].

## **6. Conclusion**

According to all functions of BL PAA platform structure, the prototype system of the platform, database design and data management of spagobi platform, and data of BL PAAS platform will be sorted out. Black PAAS ring system based on data flow, biengine ring, workflow model, organization ring, UI ring.

## **References**

- [1] Sushain Pandit, Ivan Milman, Martin Oberhofer. (2017). Principled Reference Data Management for Big Data and Business Intelligence. *International Journal of Organizational & Collective Intelligence*, vol. 7, no. 1, pp. 47-66.
- [2] Radu BONCEA, Ionut PETRE, Dragos-Marian SMADA. (2017). A Maturity Analysis of Big Data Technologies. *Informatica Economica*, vol. 21, no. 1/2017, pp. 60-71.
- [3] Vo Q D, Thomas J, Cho S, et al. (2017). Next Generation Business Intelligence and Analytics: A Survey.
- [4] ZHONG Jin-hong, WANG Hong-ye, GUO Ao-qi. (2018). Investigation and Analysis on the Cognition of Information Management and Information System Specialty in the Internet plus Era. *Journal of Higher Education Research*.
- [5] Fleckenstein M, Fellows L. (2018). *Data Warehousing and Business Intelligence*.
- [6] Brent M. Drake, Aaron Walz. (2018). Evolving Business Intelligence and Data Analytics in Higher Education. *New Directions for Institutional Research*, vol. 2018, no. 178, pp. 39-52.
- [7] Zhaohao Sun, lizhe Sun, Kenneth Strang. (2018). Big Data Analytics Services for Enhancing Business Intelligence. *Journal of Computer Information Systems*, vol. 58, no. 2, pp. 162-169.
- [8] Shih-Chia Huang, Suzanne McIntosh, Stanislav Sobolevsky. (2017). Big Data Analytics and Business Intelligence in Industry. *Information Systems Frontiers*, vol. 19, no. 6, pp. 1229-1232.
- [9] Saha G K. (2017). *Business intelligence computing issues*, vol. 2007(June), pp. 4.