Financial Information Fusion and service Platform Based on Cloud Computing

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Abstract. Cloud computing is the important form of information service infrastructure and application model in the age of the Internet, is a new generation of information technology intensive development inevitable trend, its resource aggregation and virtualization, application services, and flexible specialization, on-demand supply and use of the service mode provide highly efficient, low cost, low power consumption of computing and data services, support all kinds of information, the application of special financial information. Cloud computing technology with its own technological advantage produces a great change for enterprise informatization construction, and the operation mode of the electronic commerce enterprise and other fields. With cloud computing platform as the core business service models, it will also have significant influence on society and Internet application mode on the existing business.

The general theory and characteristics of cloud computing

Cloud computing and financial information

Cloud computing is a kind of new computing model based on the Internet, it can put the software and hardware resources, data and application as a service providing to users via the Internet. Cloud computing is a new method of infrastructure management; it can bring a lot of highly virtualized resources management, forming a huge resource pool, unified service. Cloud is actually a kind of metaphor for network and the Internet.

The core idea of cloud computing is to get unified management and scheduling of a large number of network computing resources, constitute a computational resources pool to provide on-demand services to users. The resources in the “cloud” are unlimited extension in the user view, and can be obtained at any time, according to the need of users. Providing "computing" to customers (i.e. information processing service) is the core of the cloud computing model. Currently cloud computing services mainly include: infrastructure (IaaS), platform services (PaaS) and software services (SaaS), in addition to hardware service (HaaS), data (DaaS) and application service (AaaS) and etc.

Financial cloud computing uses the constitutes principles of cloud model to make the financial institutions and the relevant institutions of data center connectivity, constitute a cloud network, or use cloud computing service providers of cloud network, spread financial products, information and services to the cloud network, in order to improve the ability to find and solve problems quickly for financial institutions, improve the overall working efficiency, improve processes, reduce operating costs, provide customers with more convenient financial services and financial information services. The server of cloud computing is in the following:

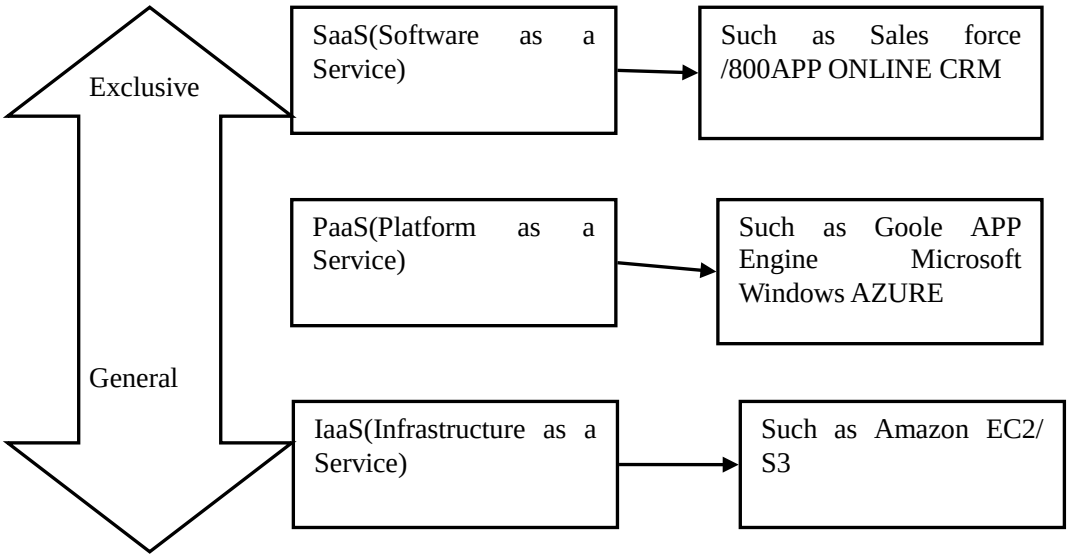

Chart 1: the service types of the cloud computing

The characteristics of cloud computing

1) Large scale: huge "cloud" can give the user the unprecedented computing and storage capacity, for example the Google cloud has already more than 100 ten thousand servers.

2) Service virtualization: cloud computing supports users in any position, using a variety of terminal access application service. The requested resource from the cloud instead of fixed tangible entity.

3) Customization: cloud computing can construct the different applications according to the different needs of customers, the same cloud can support different applications running at the same time.

4) Extensibility: to meet the needs of the application and the user scale growth, cloud can be horizontal extension and vertical extension.

5) On-demand services: "cloud" is a huge resource pool; the cloud can be like water coal pricing. Users buy according to their own needs in order to get a specific service.

6) Users transparency: transparency makes it convenient to the users to a large extent. Transparent includes transparent operation and technology.

7) Low cost: the cloud server group automation centralized management makes a lot of enterprises no need to burden increasingly high cost of data center management and maintenance cost. And cloud commonality resource utilization than traditional system, so users can fully enjoy the low cost advantage of clouds and super computing power. In addition, the use of cloud also can reduce the user IT infrastructure investment and software development, update and maintenance expenses.

Advantages of Cloud Computing

Security

Cloud computing provides the most reliable and secure data storage center; users don't have to worry about data loss, virus invasion and etc. When the user saves the document on the type of cloud service, it will minimize the possibility of loss or damage to the data. Because, at the other end of the "cloud", it has the world's most professional team to help customer information management, has the most advanced data centers to help you save the data, at the same time, strict authority management strategy can help customers to share data with a particular group.

Function expansibility

Cloud computing provides data for storage and management with almost an infinite number of possible, also for us to complete all kinds of application, provides almost infinite and powerful computing capacity. At the other end of the cloud, large cluster is composed of ten million servers

can easily do this, so as to realize the function of unlimited extension.

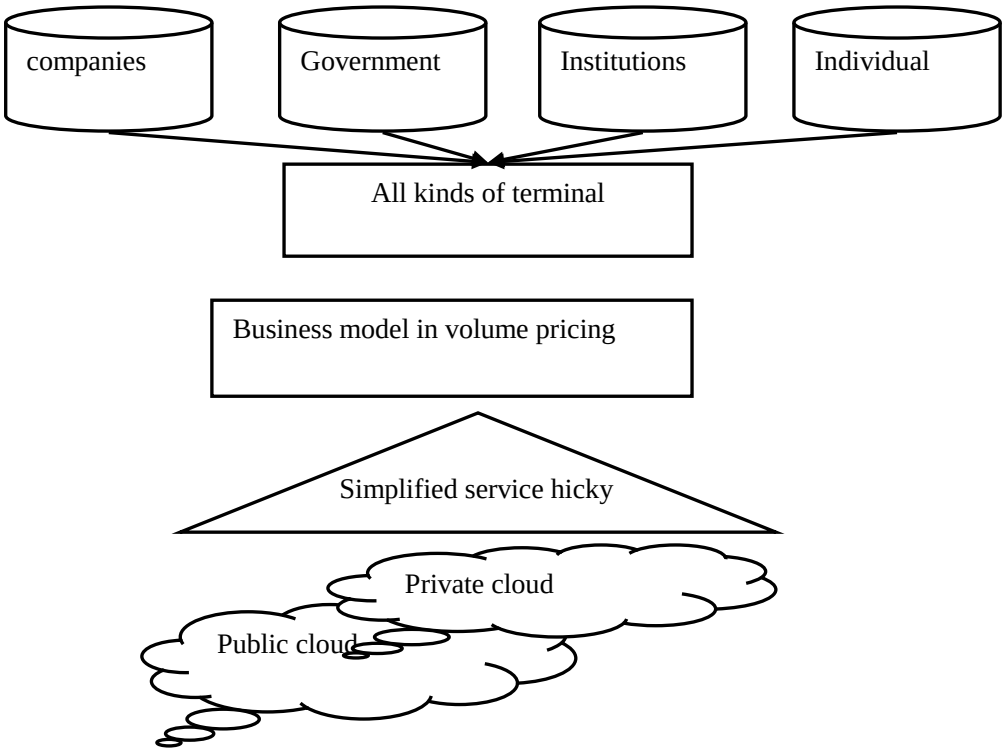

Chart 2: the model system of the cloud computing concept

The information resources integration patterns

Information resources integration in essence refers to the integrated thinking creatively applied in information resources management activities. In thinking that is guided by the integrated thought and basic principle; in behavior (way) that the behavior is of the integration mechanism and organizational mechanism as the core; in the mode of management, by means of integration of the basic elements of the information resources management combined into an organic whole, implementing the elements of collaborative complementary, making the overall efficiency of the information resource management behavior have greatly improved.

Specifically, information resources integration refers to analyze, treat information (resources) activity and its elements from a new angle, integrate them according to certain integrating mode and method; to expand the vision and territory of management through the innovative comprehensive use of various methods, means and tools in order to make various elements complementary advantages, match coordination function. Therefore it can improve the integration degree of all kinds of information factors of activity, realize the function of overall information activity multiplication or emerging, play full and effective function to organize information resources and create greater competitive organization.

Financial service platform based on cloud computing

"Cloud computing" platform virtualizes computing, storage, network and other resources geographically distributed, dispatch them in accordance with user requirements for dynamic scheduling, and monitor the status of resources, improve the working efficiency of the system. It is also the key technology that a lot of "cloud computing" application system based on. As financial information platform in the data source has the following characteristics: more complex data structure, data resources provided by the large different demand patterns and adaptive extension, the financial information service platform architecture can be divided into three levels with reference to "cloud" of the application system architecture: infrastructure layer, resource management, business application layer. Concrete structure you can see is shown in the chart 3.

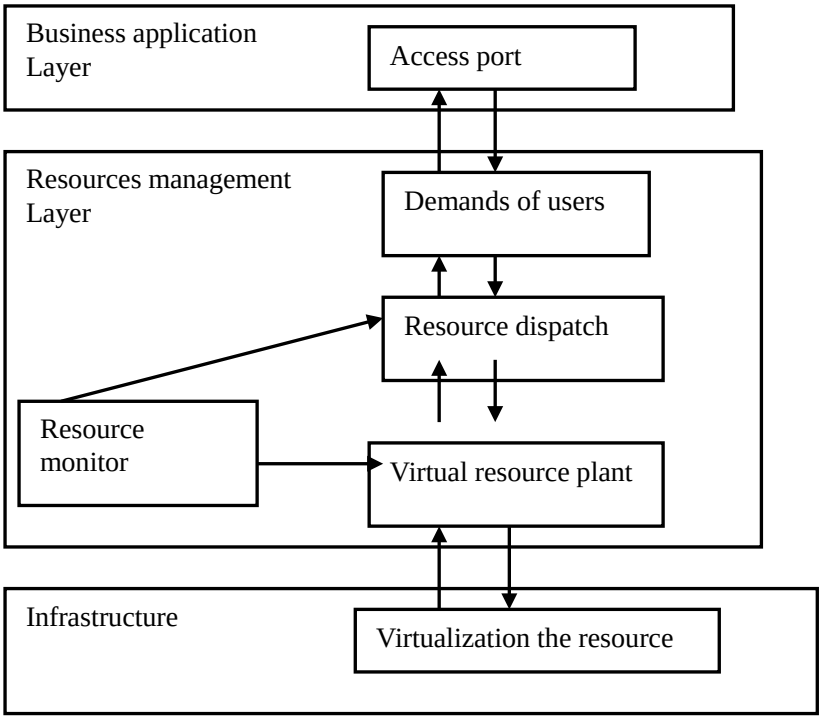

Chart 3: the service platform of the financial information

1) The infrastructure layer

The infrastructure layer is composed by the information service provided by the financial information resources and process of information service. Information providers are distributed in different regions and the use of data formats are different and not conducive to the integration of resources. The integration of heterogeneous information resources mainly uses virtualization technology.

2) Resource management

Financial information service platform should be according to the requirements of the locals, fast scheduling resources and services accordingly. In the "cloud computing" environment, the system needs to be calculated on the user's task decomposition, to the current state of the information sources, such as network load, capacity, network delay, cost, computation efficiency, storage capacity, access speed, then the decomposed tasks are assigned to the appropriate resources to calculate, and the results were set, feedback to the user.

3) The business application layer

The business application layer is the interface of the user in the form of a Web page displaying information query, analysis, processing of the interface, which is based on the infrastructure layer and resource management.

Summary

Cloud computing technology has its own technological advantage that contains the commercial value is gradually revealed. It is bound to lead the revolution of business model for enterprise informatization construction, and the operation mode of the electronic commerce enterprise in areas to make a huge change. The development of the Internet makes a new competitive opportunities, cloud computing becomes the core business service model in the existing commercial society and Internet application mode have far-reaching impact that we can think.

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