Phase 3

Cloud computing:

cloud computing has attracted a lot of attention. Cloud computing has developed quickly from a theoretical concept to the real applications in the past few years. More and more businesses and research agencies are striving to release cloud computing strategies and business models, perfect cloud computing technology, and propose the related applications of cloud computing. It enables the dynamic computing capacity, storage capacity, network exchanging capability and information service capability.Cloud computing serves the users as "pay-as-service", which supplies and delivers the end users with IT services based on their demand. It departs the IT service processes and transfers them to the cloud platform, which leads to the new service modes such as IaaS (Infrastructure as a Service), PaaS (Platform as a Service) and SaaS (Software as a Service). As a new information means and mode, cloud computing is being applied to many industries creatively. E-commerce is a typical industry which is being influenced inevitably by the features of cloud computing. This paper discusses the impacts of cloud computing on the traditional E-commerce respectively from the perspective of technology, service and industry chain and presents the necessary suggestions on the development of E-commerce businesses in the cloud era.

E-commerce technical architecture:

E-commerce is the exchange of products and services via Internet. From the perspective of system, it is composed of two layers: one layer is the technical architecture made up of hardware and software; the other layer is the business transactions based on the technical architecture. According to Laudon [6], the technical architecture is the base of E-commerce. And only on the base of the technical architecture, can the E-commerce business modes and marketing strategies be realized. In addition, the security and stability of technical architecture are the premise of online products and services exchange. Cloud computing, a new computing mode, is going to make a significant impact on E-commerce technical architecture.

cloud computing benefits the building and implementing of E-commerce technical architecture, the problems of system security and stability with it will be a problem non-neglectable. When all the IT resources such as hardware, software, data and network applications are stored on the cloud platform as services, users will unavoidably concern about the security and stability of the platform. Once the cloud platform is attacked, the important data of E-commerce transactions will be lost. Besides, customers' privacy may become an obstacle for the cloud applications of E-commerce.

E-commerce backend service mode:

The new service mode offered by cloud computing differentiates it from the traditional IT services. Firstly, all the IT resources such as hardware, software, data and infrastructure are offered to the E-commerce enterprises as service by virtue of the cloud platform [18,19]. Secondly, just like the utility services (e.g. electricity), an E-commerce company is allowed to access to the IT resources on the cloud platform and pay for them as services [8].

It does not require the high expenses on devices purchase and each firm is able to choose the appropriate IT resources through renting. In another word, the emergence of cloud computing brings the new service philosophy and mode which enables the lower cost and changes the traditional IT licensing mode.

E-commerce business strategies:

Since the emergence of cloud computing, a lot of Ecommerce firms begin to expand their business to cloud computing. Some famous E-commerce businesses such as Amazon, Google and Alibaba have involved cloud computing in their long-term strategies.Several driving forces lead to the migration of cloud computing into E-commerce strategies: 1) Demand. With the rapid development of information technology, E-commerce services are improving—the services with higher efficiency, lower cost, more flexibility and diversity are needed. For instance, Alibaba, the biggest B2B E-commerce enterprise offers the online loan services by virtue of cloud computing. Alibaba loans the small and medium businesses its own idle capital from B2B transactions. When evaluating a customer's creditability, Alibaba implements the quick data analysis with cloud computing, which ensure the efficiency and effectiveness of creditability evaluation; 2) Efficiency. The efficiency advantages of cloud computing lies in two aspects: on the one hand, the huge data storage is becoming a problem with the growth of E-commerce firms. Establishing the data center is unaffordable for medium and small E-commerce enterprises.

E-commerce industry chain structure:

Cloud computing may influence the traditional E-commerce industry chain and lead to the chain restructuringTraditionally, the E-commerce industry chain is composed of the hardware supplier, software developerInternet service provider, system integrating provider, service supplier, E-commerce enterprise and customer (Figure 1). Each member of the industry chain fulfills its own functionalities. The hardware supplier, software developer, Internet service provider, system integration provider, service supplier exist as the backend of the E-commerce enterprise and offers it the technical support.When cloud computing is migrated into E-commerce industry, one cloud service provider can supply almost all the necessary products and services to an E-commerce website. As a result, the structure of E-commerce industry chain will be changed (Figure 2).

Figure 1:

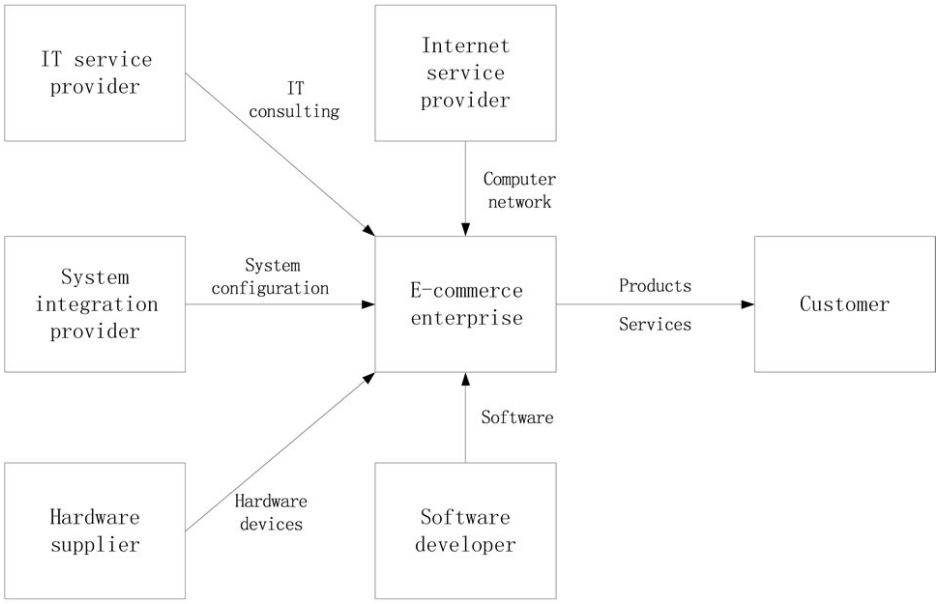
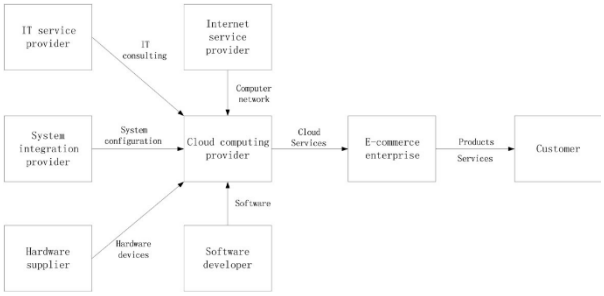

IT service provider
IT consulting
Internet service provider
Computer network
System integration provider
System configuration
E-commerce enterprise
Products
Services
Customer
Software
Hardware supplier
Hardware devices
Software developer

Figure 2:


IT service provider
IT consulting
Internet service provider
Computer network
System integration provider
System configuration
Cloud computing provider
Cloud Services
E-commerce enterprise
Products
Services
Customer
Software
Hardware supplier
Hardware devices
Software developer