

Using Cloud Computing to Support a Mobile Business

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In recent years, the influence of information technology on business has grown rapidly. Mobile business has become popular because it can provide services to a large number of users, without time limitations and geographical restrictions. The potentially huge number of users and lower set-up threshold attracts many start-up entrepreneurs to target this market. Because of a lack of funds, start-up entrepreneurs have to find a balance between system functionality and cost. In other words, they face a trade-off between function and finance.

In the development stage, which server to use to provide the company's service is a big decision, and there are two primary choices available: to build a traditional server, or to deploy the service to a cloud computing platform.

This dissertation analyses the benefits of using a cloud computing service by investigating cloud computing's architecture, technologies and service types (SaaS, PaaS and IaaS) and comparing cloud computing platforms offered by various companies. The dissertation also investigates business models and the status of cloud computing services, reviewing the differences between various cloud computing solutions.

Following the conclusions from the theory research, this dissertation designs and develops a real mobile business application, setting up two kinds of servers for

comparison: one that uses a traditional server and the other that deploys a server to the cloud. In the evaluation of the experiment, the dissertation mainly considers the service latency, reliability and cost saving.

The primary conclusions of this dissertation are: Service latency using the cloud server is similar to that of the traditional server, though the cloud server performs slightly better. However, the traditional server is more reliable than the cloud server. From the standpoint of cost, Amazon's Cloud service is relatively cheap in small-scale and so could be used when the business is first starting up, while Google Cloud is a good choice for a business when it has the potential to grow to a medium-size enterprise, as its performance is good and the cost is lower at medium-size scale. With regards to the traditional server, it is more suitable for a business that has grown to a large-scale enterprise.