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**APPLICATIONS OF CLOUD COMPUTING FOR BOTH IT AND THE BUSINESS**

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**ABSTRACT**

*Cloud computing has been credited with increasing competitiveness through cost reduction, greater flexibility, elasticity and optimal resource utilization. Here are a few situations where cloud computing is used to enhance the ability to achieve business goals.*

*In this paper we have studied on applications of cloud computing in E-Business. Cloud computing is the latest blip -- albeit a big one -- in a trend that included the ill-fated NetPC backed by Oracle CEO Larry Ellison in the 1980s, and more recently by ever more powerful cell phones and mobile devices that combine local storage and smarts with an array of powerful capabilities served up from outside.*

**INTRODUCTION**

Information technology is changing rapidly, and now forms an invisible layer that increasingly touches every aspect of our lives. Power grids, Traffic control, Healthcare, Water supplies, Food and Energy, along with most of the world's financial transactions, now depends on information technology. An emerging IT delivery model--cloud computing--can significantly reduce IT costs & complexities while improving workload optimization and service delivery. Cloud computing is massively scalable, provides a superior user experience, and is characterized by new, internet-driven economics [3].

**DEFINITION OF CLOUD COMPUTING**

1. Cloud computing is a technology that uses the internet and central remote servers to maintain data and applications. Cloud computing allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access. This technology allows for much more efficient computing by centralizing storage, memory, processing and bandwidth.
2. Cloud computing is Internet-based computing, whereby shared resources, software, and information are provided to computers and other devices on demand, like the electricity grid.
3. Cloud computing describes a new supplement, consumption, and delivery model for IT services based on the Internet, and it typically involves over-the-Internet provision of dynamically scalable and often virtualized resources.

**CLOUD COMPUTING NEW OPPORTUNITIES FOR BUSINESS**

IT is an integral component of today's businesses and is frequently a company's single biggest capital cost, this paradigm shift in IT provision is having an increasingly disruptive impact on the way that organizations are designed, deployed and managed. We believe every business should explore the opportunities that cloud computing offers [1].

The most important value the cloud brings is not lower costs. It is improved agility, not just for IT, but for the business as a whole. Cloud computing is already helping world-class organizations operate faster, more flexibly and effectively, as well as at a substantially lower cost.

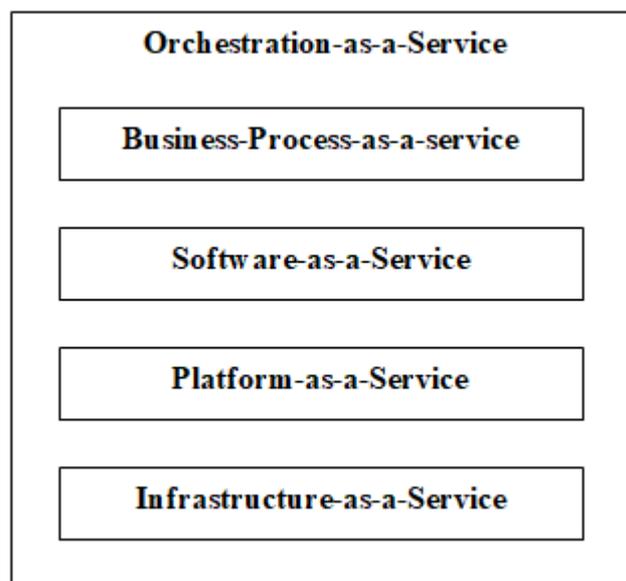
It is difficult to overstate the significance of the cloud's ability to enable systems and even entire business infrastructures to be built, expanded, reduced, modified or shut down entirely without the lag times and fixed costs we have all become so used to. Consequently, the biggest cloud computing benefits are being gained in business effectiveness areas such as speed, availability, responsiveness and innovation. This is the main cloud computing opportunity today. Quantifying these benefits is not always as easy as demonstrating lower costs, but the workshop suggested in this Workbook will help us to consider issues such as quality, cycle time and customer/employee satisfaction, and discover where our organization will most benefit from cloud computing [2].

The cloud offers the efficiencies of just-in-time computing. For a variety of historical, political and practical reasons, server utilization in many enterprise data centers is as low as 10 percent, a level that would not be tolerated in any other expensive capital asset. Cloud computing enables a range of possible solutions to this long-intractable industry problem. It can provide the IT 'safety stock' of the future, reducing computer capacity inventories, smoothing out peak load requirements over many customers, and enabling each individual enterprise to run at much higher rates of utilization, paying for extra capacity only when needed.

**FOUR LAYERS OF ARCHITECTURE OF THE CLOUD**

When taking our first steps towards cloud computing, one of the most difficult questions is which applications we can move to the cloud [2]. We see the architecture of the cloud as a stack of four layers, as shown in Figure 1. :

- I. **Infrastructure-as-a-Service**:-It is the lowest layer which is used to access hardware resources, but little software support.
- II. **Platform-as-a-Service**:-It is the next layer provides the cloud development platforms enable application authoring and provide runtime environments.
- III. **Software as-a-Service**: - Provides a wide range of business-level services and information to end users which is used to access software resources.
- IV. **Business-Process-as-a-Service**: - It is use of the process outcomes without either staff or capital investment.



**Figure 1**

**ADVANTAGES OF CLOUD COMPUTING IN E-BUSINESS**

Through cloud computing, enterprises we can:

- 1) Easily expand scalability and enhance elasticity
- 2) Reduce capital expenditure
- 3) Save energy
- 4) Increase end-user productivity
- 5) Improve reliability
- 6) Free up capacity to invest in new projects

**CONCLUSION**

Cloud computing is providing enterprises with a fundamentally new way to cost-effectively and quickly deploy services and capabilities. It enables IT organizations to transform the way they operate and dramatically improve how consumers access their information and experience applications.

Enterprises that are looking for ways to streamline internal IT operations and to expand on-premise infrastructure to add capacity on demand, as well as organizations wanting a fully outsourced infrastructure, are investigating the many advantages of cloud computing.

**REFERENCES**

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