ABSTRACT

The population is living in a complex world at information explosion age. Today in Enterprises, the size and complexity of managing information have been increasing significantly and the demand for cost efficient information storage and processing grows higher. Enterprises need to optimize their IT management and minimize server maintenance costs become greater as usage demands prove to be increasingly unpredictable. Cloud computing offers a promising solution. Cloud computing is a computing model that relies on a large, centralized data center to store and process a great wealth of information. Computing power and storage space are provided on-demand to Enterprises that outsource their IT management to the cloud service provider. The immediate advantage to this computing model is a lower infrastructure maintenance cost. Since Enterprises that use cloud no longer require on-site servers, they eliminate the associated cost in IT management and electrical power.

Keywords: BigData, Cloud Computing, DBMS, Virtualization

1. INTRODUCTION

Enterprises of the 21st century make great demands on managing large amount of information. Enterprises permanently keep pace with today’s changing situations, adjust their skills and expertise with agility, collaborate and compete to provide value to society. It is well documented that our society is characterized by rapidly developing and ever changing political, social, economic, educational, technological and environmental situations (Gütl & Chang, 2008). As a result, Enterprises must support these demands (Ebner, Hozinger & Maurer, 2007).

As data volumes increase at exponential speed in more and more application fields of science, the challenges posed by handling BigData gain an increasing importance.

The need for managing BigData is increasing constantly and the development and the improvement of the BigData Management solutions is necessary. Also, Enterprises need to keep the pace with the technology (Pocatilu, Alcu & Vetrici, 2010), so recently research community has believed that cloud computing is the best solution for managing BigData. Also,
There is no doubt that the future belongs to the cloud computing. This new technological environment supports the creation of a new generation of Enterprises that is able to run on a wide range of hardware devices, while storing data inside the cloud (Ouf, Nasr & Helmy, 2010). Cloud computing is becoming an adaptable technology for many of the Enterprises with its dynamic scalability and usage of virtualized resources as a service through the Internet. It will likely have an important impact on the business environment in the future. Today Enterprises can get Infrastructure as a Service (IaaS), Platform as a Service (PaaS) or Software as a Service (SaaS). There are elastic clouds where memory and processing power get allocated based on computing resources required at the time (Zhang, Cheng & Boutaba, 2010).

So, the aim of this paper is to investigate the adoption process of new technologies in managing Enterprise’s BigData in situations of high complex environment, specifically uncertainty about external, internal, and technology factors surrounding the adoption of a new technology. This paper is organized as follows: Section 2 focuses on mobility, cloud computing concepts and benefits, Section 3 describes the key players in the Cloud Computing, Section 4 and Section 5 illustrates a proposed model for BigData in the cloud (see Figure 1).
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