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DEVELOPMENT OF CLOUD TECHNOLOGIES AND FEATURES OF THEIR USE IN E-COMMERCE

Abstract

Recently, the role of Information Technology in enterprise business has increased with the advent of new levels of service, storage requirements, resource management, and availability. Cloud computing affects a variety of sectors, including e-learning, healthcare, and e-commerce. They offer online services with high efficiency and minimal costs that provide high economic value. This is undoubtedly the next revolution in the Internet world, as well as in the business world. Currently, more and more e-commerce companies are moving to cloud computing in order to achieve high practical value. This article provides an overview of cloud computing in e-commerce by discussing various definitions of both concepts, highlighting the advantages and challenges of using cloud computing in e-commerce, discussing the proposed cloud computing structure in e-commerce, and considering. We will also analyze statistics on the current state of cloud technology use in Ukraine, Poland, and other European Union countries.

Key words: e-commerce, cloud computing, cloud technologies.

Introduction

In the last decade, the world of technology has changed rapidly. Recent trends, such as data mining and cloud computing, have largely evolved on their own to meet trendy spheres such as e-commerce. In the past, to sell goods, you had to physically rent office space, which added various costs. E-commerce appeared and allowed businesses to sell goods online without having to rent a store, as before. Businesses that develop e-commerce must invest resources in hardware, a software system created by a person with some experience to run and maintain. As the business expands, the resources needed will only grow.

The cloud allows a provider to host an application on his own infrastructure, which a customer can use on a subscription basis, the customer thus gets rid of significant investments in his own infrastructure and invests more quickly in his business affairs. The benefits of investing in cloud computing in business have been widely recognized: flexibility, reliability, increased availability and reduced e-business expenditures. Under the current conditions, the cloud computing model allows companies with smaller investments to engage in e-commerce. Currently, the combination of e-commerce research and cloud computing is focused on the technical level, so to launch a cloud model, e-commerce research programs will have high practical value.

Literature overview

The term "cloud computing" currently has no single definition. Raymond (2001) defined e-commerce as "the function of exchanging information and supporting commercial transactions that operate in telecommunications networks that connect business partners (usually customers and suppliers)". The IEEE Computer Society defined it as: "a paradigm in which information is permanently stored on servers on the Internet and temporarily cached on clients, which include laptops, entertainment centers, computers, laptops, PDAs, etc.". It is an IT tool used to provide computing as a service, not a product.

Google is a pioneer in cloud computing, and in their concept, cloud computing should "offer secure, fast and convenient data storage and networking services based on open standards and Internet-oriented service". In 2007, IBM defined cloud computing as "a term used to describe both the platform and the type of program". IBM views cloud computing as "a pool of virtualized computing resources that manages a variety of workloads by quickly providing a virtual machine or physical machine with rapid deployment and increased workload".

Cloud computing has three widely used service models. SaaS (Software as Service): the end user will deal with the site remotely over the Internet. PaaS (platform as a service): it is primarily focused on the activities of developers who want to deploy their applications directly on the cloud server, and they have no interest in connecting to the server infrastructure. IaaS (Infrastructure as a Service): it allows developers to have the highest level of direct interaction with the server infrastructure. It also allows them

to deploy and manage their own programs remotely. So far, the SaaS model is the dominant model in the current industry.

Statistical analysis

The implementation of cloud computing and e-commerce in countries has been widely discussed in a number of studies that have shown that these innovations have contributed to the transformation of countries into digital economies, leading to global market penetration and national economic growth.

According to statistics on the use of cloud technologies by enterprises, Poland is almost at the bottom of the list of countries in the European Union. In 2017, only 10% of enterprises in Poland used cloud services in their activities. At the same time, the average value among the EU countries is 25%. The situation is almost similar in Ukraine - only 10.3% of enterprises practice the use of cloud services in their activities. Ukraine and Poland are not the last in this list, but it is worth noting that for Finland this figure in 2017 was as much as 66%. Based on the data presented in Fig. 1, it can be concluded that the level of use of cloud technologies in Ukraine and Poland is 2.5 times lower than the average for the European Union.

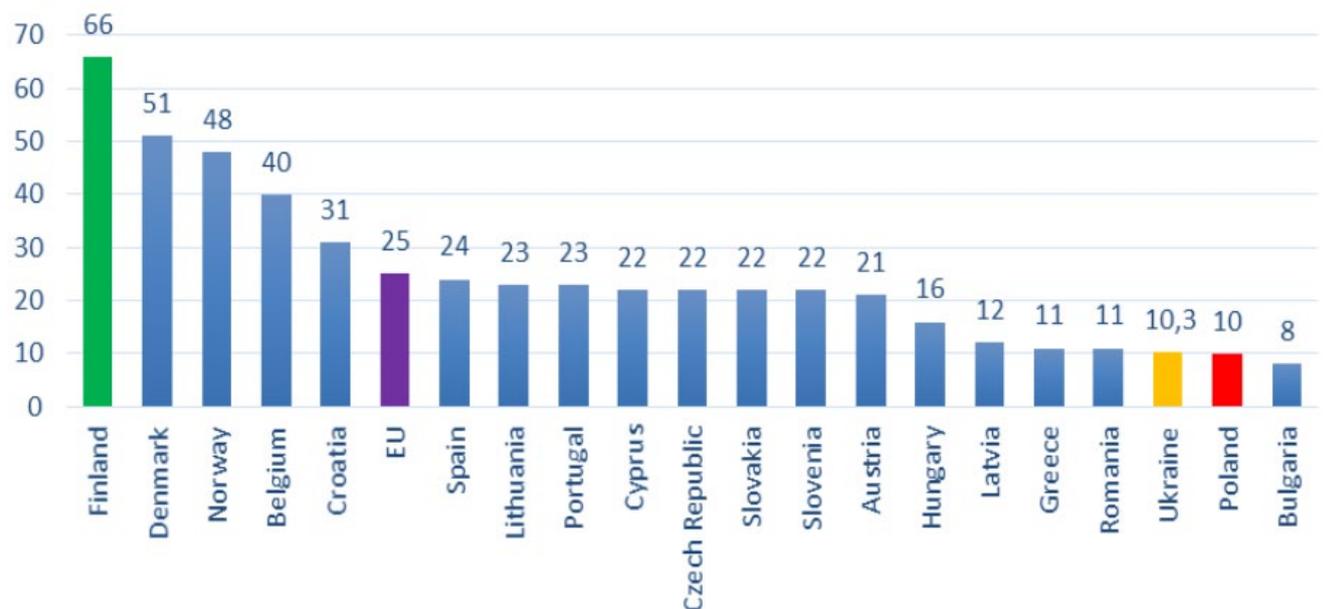


Figure 1. Percentage of enterprises that apply cloud computing services in 2017.

Conclusions

Cloud computing is the solution of key challenges faced by e-commerce providers to integrate their services with the growing demands and scale of users. In the future,

research may expand to analyze some other factors that may influence the implementation of cloud computing for integration with e-commerce facilities. It is possible using the internet, the only thing to worry about is the speed and bandwidth of the internet at affordable prices. Cloud computing is expanding and spreading as a business solution because it has shown efficient and positive results that put them at the top of IT technology, because of its flexibility in space and huge support for infrastructure and software. Undoubtedly, this will be the fifth utility service after water, gas, electricity and telephone, which are always included and paid for by the consumer. The level of use of cloud technologies at enterprises in Ukraine, as well as in Poland, is significantly lower than the average in the European Union. Concerns about data security and the legal aspects of using cloud services may be the main reasons why companies do not use cloud computing.

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