

Проект создания облачных вычислений в бизнесе и их использование

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Аннотация

В статье представлено использование облачных вычислений в бизнесе и их динамичное развитие в наши дни. Здесь мы также обсудим историю облачных вычислений, сервисы, преимущества и т. д. Но наша основная задача - показать анализ и статистику, чтобы дать представление о огромном спросе облачных вычислений.

Ключевые слова: Cloud Computing, Cloud Adoption Strategies, бизнес, SAAS, PAAS, IAAS, типы облаков, история, преимущества.

The project of establishment of Cloud Computing in Business and its Uses

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Abstract

The article presents the uses of cloud computing in business and how it's growing so rapidly in present days. Here we will also discuss about cloud computing history, services, benefits etc. But our main focus is to show the analysis and statistics to give an idea about huge cloud computing market.

Keywords: Cloud Computing, Cloud Adoption Strategies, business, SAAS, PAAS, IAAS, types of cloud, history, benefits.

Goal

In today's world without any doubt we are experiencing technological revolution that changes our lives far beyond the norm. Cloud Computing is one of

those technological revolution which growing in a larger scale. And our analytics and information will show how this is growing faster day by day.

General Information and analytics

According to a study by Forbes, Cloud computing is projected to increase from \$67B in 2015 to \$162B in 2020 attaining a CAGR (compound annual growth rate) of 19%. Gatepoint Research has done a survey showing why, Information Technology pros and business executives both are quite fond of the advantages of Cloud storage.

This is the Survey Summary of their recent research. Between November 2017 and August 2018, Gatepoint Research invited selected executives to participate in a survey themed Cloud Adoption Strategies.

Responders work for firms with a wide range of revenue levels:

- 65% work in Fortune 1000 companies with revenues over \$1.5 billion;
- 10% work in large firms whose revenues are between \$500 million and \$1.5 billion; § 25% work in Small or Mid-Market firms with less than \$500 million in revenues [1].

Dustin Smith, a Senior Marketing Manager for the Analytics and Business Intelligence Company Tableau Software, stated:

“The tipping point is upon us. Cloud adoption is well past the perception of something that only startups do. Large enterprises from every conceivable industry are transitioning their entire infrastructure and data ecosystems into the Cloud. Cloud technology strategies cut cost and risk. That message is impossible to miss.”

Before starting more advanced talk about cloud computing let's check the history and definition of it.

Cloud Computing History

During the 1960s, the initial concepts of time-sharing became popularized via RJE (Remote Job Entry). Full-time-sharing solutions were available by the early 1970s on such platforms as Multics (on GE hardware), Cambridge CTSS, and the earliest UNIX ports (on DEC hardware). In the 1990s, telecommunications companies, who previously offered primarily dedicated point-to-point data circuits, began offering virtual private network (VPN) services with comparable quality of service, but at a lower cost. By switching traffic as they saw fit to balance server use, they could use overall network bandwidth more effectively. The term "cloud computing" was popularized with Amazon.com in 2006. But the references show that the phrase "cloud computing" appeared as early as 1996. [2]

Definition of Cloud Computing

The meaning of cloud computing can simply describe as the virtualization and central management of data center resources as software-defined pools. The most popular meaning of cloud computing refers to running workloads over the internet remotely in a commercial provider's data center—the so-called “public

cloud” model. From a customer perspective, the public cloud offers a way to gain new capabilities on demand without investing in new hardware or software.

AWS (Amazon Web Services), Microsoft Azure, Alibaba Cloud and Google Cloud Platform all exemplify this popular notion of cloud computing.

Cloud Computing Uses

From Scalable Usage to Chatbots, cloud computing has a vast usage like communication, productivity, business process, backup and recovery, application development, test and development, big data analytics, social networking and so on.

Cloud Computing Services

The wide range of services offered by cloud computing companies can be categorized into three basic types:

Infrastructure as a Service (IaaS): It is one of the three main categories of cloud computing services. IaaS provides users access to raw computing resources such as processing power, data storage capacity and networking, in the context of a secure data center. Examples: Amazon Web Services (AWS), Cisco Metapod, Microsoft Azure, Google Compute Engine (GCE), Joyent.

Platform as a Service (PaaS): It provides a platform allowing customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure. Geared toward software development teams, PaaS offerings provide computing and storage infrastructure and also a development platform layer, with components such as web servers, database management systems, and software development kits (SDKs) for various programming languages. Examples of PaaS are AWS Elastic Beanstalk, Windows Azure, Heroku, Force.com, Google App Engine, Apache Stratos, OpenShift, etc.

Software as a Service (SaaS): It is a software distribution model in which a third-party provider hosts applications and makes them available to customers over the Internet. SaaS providers offer application-level services tailored to a wide variety of business needs, such as customer relationship management (CRM), marketing automation, or business analytics. Examples of SaaS are AWS Elastic Beanstalk, Windows Azure, Heroku, Force.com, Google App Engine, Apache Stratos, OpenShift, etc.

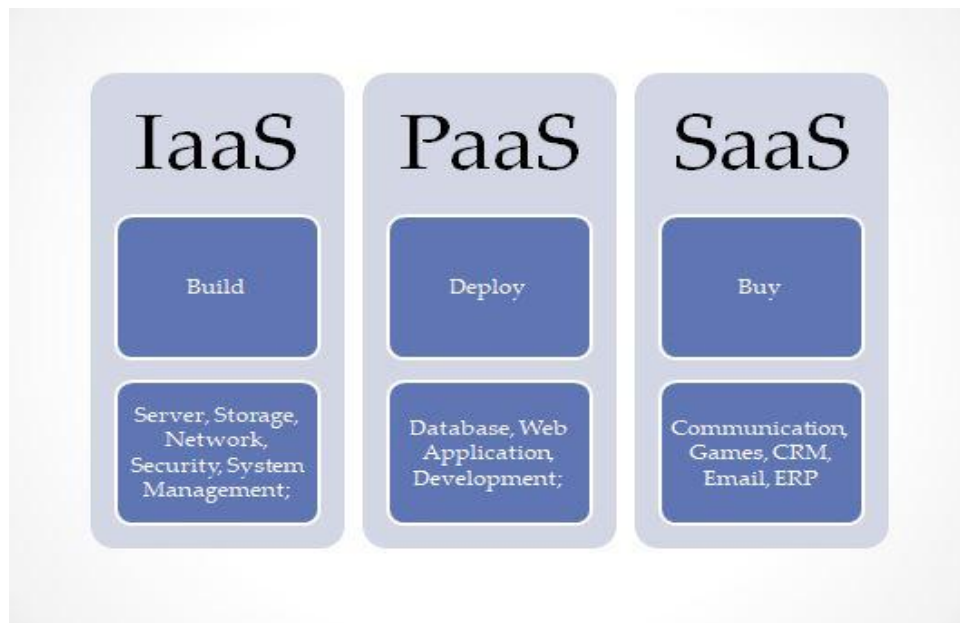


Fig.1. Cloud Computing Services

Cloud Computing Types

Cloud computing is usually described in one of two ways. Either it is based on the cloud location or on the service that the cloud is offering.

Based on a cloud location, we can classify cloud as: public, private, hybrid, community cloud. As public clouds use shared resources, they do excel mostly in performance, but are also most vulnerable to various attacks.

Private cloud means using a cloud infrastructure (network) solely by one customer/organization. It is not shared with others, yet it is remotely located. If the cloud is externally hosted then it is another question. The companies have an option of choosing an on-premise private cloud as well, which is more expensive, but they do have a physical control over the infrastructure.

The security and control level is highest while using a private network. Yet, the cost reduction can be minimal, if the company needs to invest in an on-premise cloud infrastructure. Hybrid cloud, of course, means, using both private and public clouds, depending on their purpose. For example, public cloud can be used to interact with customers, while keeping their data secured through a private cloud.

How it works

Since the birth of the internet, there has been an explosion of a wide array of information in the World Wide Web as cloud computing continues to develop steadily. Both the standard users and digital marketers can now generate loads of information about the consumer using social media marketing platforms on a daily basis. And also we can say, the development of cloud computing made it easier for business enterprises to get technology in packages that are affordable. The cost of storing company information was significantly reduced by use of cloud computing, which also came with multiple applications that can be utilized by small business enterprises.

Why big companies are using Cloud Computing

Moving your business with cloud computing is not an easy task even for big companies. But some attractive and effective reasons make it easy for big companies to reach to a decision.

Here are some advantages of cloud computing-

- Cloud computing service could be considered "ready to use" or "off the shelf" because it is designed to serve the specific needs of a set of consumers, and the technologies are tailored to that need rather than the service being tailored to how the technology works.
- Scalability is a feature of the underlying infrastructure and software platforms. Elasticity is associated with not only scale but also an economic model that enables scaling in both directions in an automated fashion. This means that services scale on demand to add or remove resources as needed.
- Cloud computing Services share a pool of resources to build economies of scale and IT resources which are used with maximum efficiency.
- Cloud computing Services are metered by Use. This service tracked with usage metrics to enable multiple payment models. The service provider has a usage accounting model for measuring the use of the services, which could then be used to create different pricing plans and models.
- One of the well-known services of cloud computing is the Uses of Internet Technologies. The service is delivered using Internet identifiers, formats and protocols, such as URLs, HTTP, IP and representational state transfer Web- oriented architecture [3].

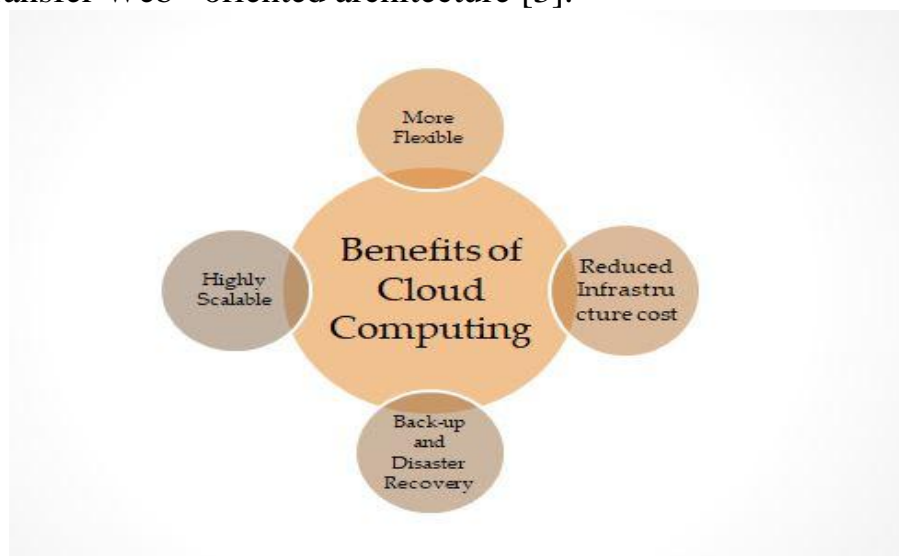


Fig.2. Cloud Computing Benefits

People psychology

It's definitely an important decision for any company who desperately trying to work in cloud computing services. This is why we should take proper attention and analysis to get the best service providers for our business. It is highly recommended to perform market research before take any further steps. Recently

business owners take decisions depending on various parameters and methods to run the business perfectly on cloud platforms. Service providers are also giving their feedback and transparent business policies in front of clients.

Conclusion

So it's possible to say that cloud computing has a significant impact in world economy from a small business owner to a multinational company. Firms from a wide variety of industries including business and consumer services, education, financial services, healthcare, manufacturing (general and high tech), retail trade, telecom services, transportation, and utilities all are now considering cloud computing as a solution. This is why cloud security is very essential because many users are still worried about data security over the internet. If this can solve then it is a matter of time that we all will depend on cloud computing more.

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