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A RELATED WORK ON CLOUD COMPUTING

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Abstract:
The IT industry is currently utilizing technology of cloud computing. Cloud-based systems, reliant via the internet, possesses the utmost robust computational architectural design. It consists of a cohesive and interconnected array of technology, applications, and the network supporting the Internet. It possesses multiple roles at the upper section pertaining to the grid and within various computer systems. In this work, I reviewed over 30 cloud computing articles and gave a brief overview of the topic. The review's findings illustrate the state pertaining to the information technology sector both prior to and subsequent to the cloud.

Keywords: Cloud computing, SaaS, PaaS, and IaaS.

I. Introduction

The term "cloud" in cloud computing denotes the physical clouds composed of water molecules. Cloud computing functions are available to the user at any time. Users usually choose a middleman over constructing their own physical infrastructure when it comes to cloud computing internet services. Only the services they have utilized are subject to payment [1]. The workload related to cloud computing can be reduced by moving. Applications do not load quickly on local computers when they are operating because the networks in the cloud handle a lot of the services [3].

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As a result, there are less hardware and software requirements for users. We all require utilizing A web browser optimized for cloud computing. Accessing cloud computing requires merely the use of a web browser, such as Chrome. The fundamental elements of cloud computing are as follows:

I.I. Asset Aggregation and Flexibility

I.II Automated and as-needed offerings.

I.III. Service quality

I.IV. Costing

Software as a service, infrastructure as a service, and platform as a service are the three main offerings from cloud computing [3]. Cloud computing cases within regular living include Gmail, Dropbox, Social media platform, and hence forth. Its application in businesses is expanding quickly because it offers Scalability, adaptability, nimbleness, and straightforwardness.

Fig[1] Cloud Computing

II. CLOUD COMPUTING EVOLUTION

John McCarthy once claimed in an MIT address from 1960 that computer technology could be marketed as a powerhouse, much like electricity and water. The Salesforce Organization started making The client apps available on a handy webpage in 1999 [4]. In 2002, Amazon created Amazon Web Services, which

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offered computation and storage services. Oracle began offering cloud computing services to major corporations including Google, Microsoft, and HP in 2009 [6]. These days, cloud computing services are used by everyone in their everyday existence. For instance, iCloud, Pictures on Google and files stored in Google Drive. Cloud computing is going somewhere will be essential to the IT sector

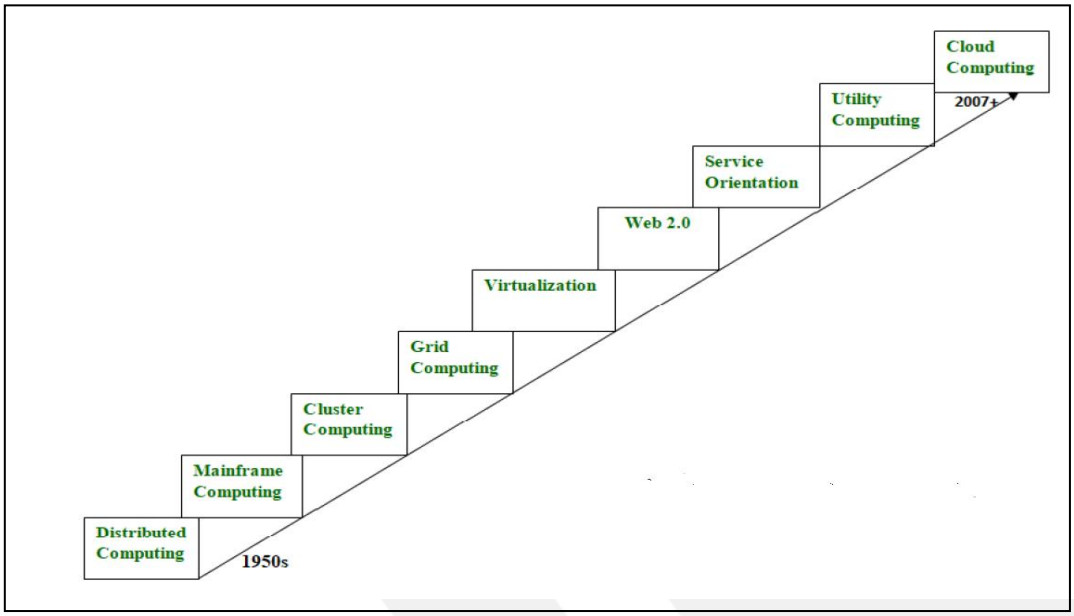

Fig (2): CLOUD ELEMENTS EVOLUTION

III. CLOUD COMPUTING ELEMENTS

Three essential elements make up cloud computing.:

III.I Customer PCs: The client PCs are used by The final user to communicate utilizing the cloud.

III.II Dispersed Server: Although The hosts are spread out across many locations, they function similarly.

III.III Data Centers: Servers are grouped together in data centers.

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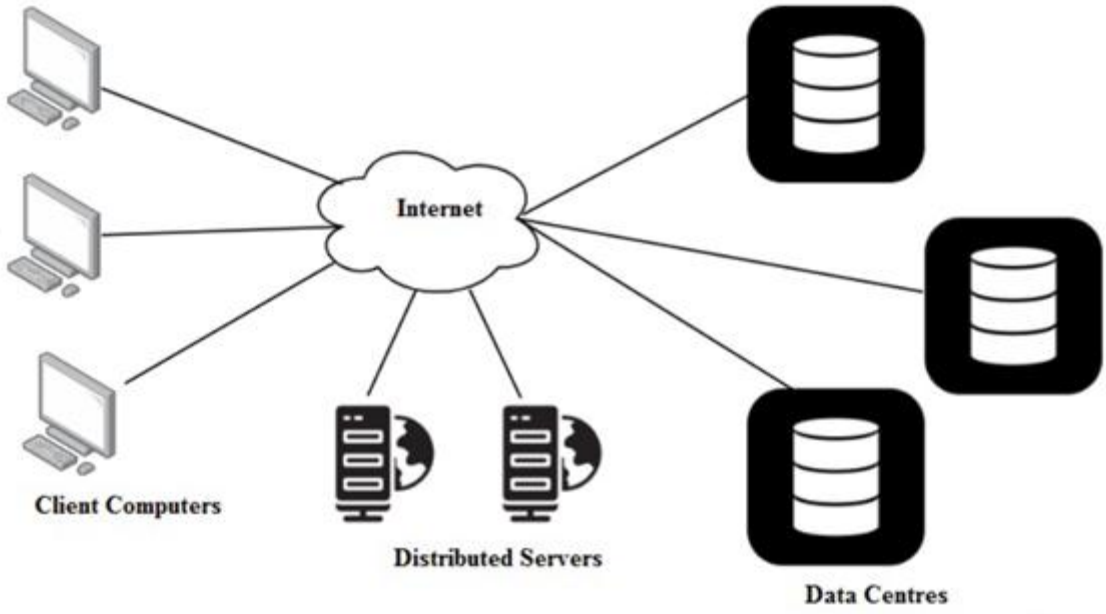

Fig (3): Components of Cloud Technology

IV. CLOUD INFORMATION SERVICES

IV.I. SaaS (Service-Based Software): The method of offering a program via software as a service is what the Internet is all about. Instead of downloading and installing the software on their computer, users can access it online [8]. It releases a user from handling intricate computer programs and hardware. SaaS Hardware and software are not required to be purchased, maintained, or upgraded. For users to have very quick access to the software, all they need is an Internet connection. Examples include Google Apps, All-Access Microsoft Office, among others.

IV.II PaaS, or (the cloud computing platform): PaaS services give users access to a development environment or platform that lets them utilize their own codes and software. The client is free to develop his own programs that make use of the supplier's infrastructure [8]. To accomplish application management capabilities, a goods as a service provider offers an application server and operating system

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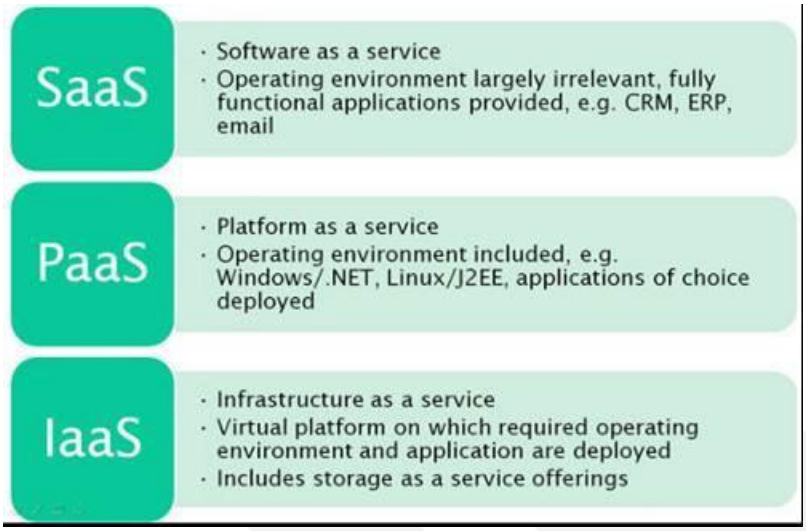
with a predetermined configuration. For example, Linux, MySQL, PHP, J2EE, Ruby, Apache, and so on

IV.III Infrastructure as a Service, or IaaS, includes hardware, operating systems, networking, storage, and on-demand storage devices. are just a few of the computational resources that the IaaS offers.

Users of IaaS can access services over a large network, including the internet [8]. For instance, by signing onto the On an Infrastructure as a Service platform, users are able to create hybrid PCs.



Fig(4): Cloud-Based Information Technology Services

V. IT IN THE CLOUD DIFFEREENT TYPES

V.I. Public Cloud: a third-party provider of public Internet computer services is referred to as a public cloud [9]. These services are available to anyone who wishes to utilize them, and the only fee is for their services.

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V.II Computing services that are accessible via a private network or the internet are referred to as private clouds. this category accessible to a limited number of users, replacing regular people [1, 9]. Private clouds use internal hosting and a firewall to provide increased security and privacy.

V.II. Hybrid Cloud: Private and public clouds are combined to create a hybrid cloud. Although every cloud can be controlled separately, hybrid clouds allow for the sharing of apps and data [9].

VI. CLOUD INFORMATION ADVANCED

VI.I Saving Money: When using cloud-based systems services, Users are required to pay solely for the services rendered. they utilize. Because users are not required to purchase, infrastructure expenses are minimal [1].

VI.II Flexibility: Cloud computing's scalability. Cloud computing can be flexible enough to handle such fluctuations; if your company's Operations fluctuate frequently, resources and hardware can be instantly adjusted.

VI.III Strengthened Protection: High safety in cloud computing is ensured by the use of security intelligence, key management, robust access control, and data encryption.

VI. IV Global Scale: One of cloud computing's benefits is its adaptive scalability. This entails supplying the right amount of Information Technology resources from the right cloud location at the right time, including different levels of processing power, storage, and bandwidth.

VI.V Velocity: The self-service and on-demand options are prevalent in cloud computing. With a few mouse clicks, substantial processing power can be accessed within minutes. This eases the strain on capacity planning and offers businesses a great deal of flexibility.

VI.VI Productivity: In general, an abundance of hardware for "storage and storage" configuration, software repairing, in addition to monotonous IT administration responsibilities —is needed in on-site data centers. Many of these

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tasks are eliminated by cloud computing, allocating additional time for IT personnel to focus on critical business objectives.

VI.VII Performance: In a world where data centers are located all over the place updated with the latest models of swift and effective computer hardware, offers the largest cloud computing services. This offers multiple benefits compared to a singular enterprise data center, such as diminished network latency and enhanced application efficiency.

VII. ANALYZATION

The origin, evolution, classifications, and elements of cloud computing, along with a brief description of its many ways and benefits, have all been covered in this review study. The field of applications for cloud computing is always growing. Nowadays, almost all small and major enterprises use cloud computing to manage their hardware, storage, and transportation needs. Thus, It is clear that the industry and society are greatly impacted by cloud computing.

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