Cloud Computing- A New Reference.

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Abstract:-

Cloud computing has established as one of the fastest-growing segments of the information technology industry. The ability to courage economics of scale, geographic distribution, and source opened software and automated system to drive down costs makes it most attractive for business.

Cloud computing provides customer the illusion of infinite computing resources which are available from anywhere, anytime on demand.

It is at such an immense scale which requires a frame work that can support extremely large datasets housed on commodity hardware as clutters.

Cloud computing is on sharing of resources to achieve coherence and economic of scale which is quite similar to utility over a network. Cloud computing allows companies to avoid upfront infrastructure cost and focus on projects that differentiate their business instead of infrastructure.

- *It allows the enterprises to get their application up and running faster with improved manageability and less maintenance.*
- *Enables IT to more rapidly adjust resources and to meet fluctuating and unpredictable business demand.*
- *It provides typically use of "pay as you go model" this can lead to unexpectedly high charges if administrator do not adapt to cloud pricing model.*

Introduction:-

The word cloud computing is basically derived from the diagram of clouds used to represent internet in diagram and flowchart. In 1990's,the telecommunication companies made a radical shift from point to point data circuits to virtual private network services(VPN) in this process by optimizing resource utilization through load balancing they were unable to get their work successfully done more efficiently and less expensively and by handling this problem the concept of cloud computing was derived. First time the term was used in current context in 1997 by Ramnath Chellapa where he define it as a new, "computing platform where the boundary will be determined by economic rationally rather than technical limit alone."

Thus cloud computing is a general word used for anything that involves delivering hosted services over the internet. In computer networking, cloud computing is used to describe computing concept involving a large number of computer connected by a real time network communication such as internet .Cloud computing is a style of computing where dynamically scalable and virtualized resources are provided as a service over the internet. The cloud is a reference to hardware data center and software that

Cloud Computing- A New Reference *Anuj Kumar Bishnoi & Priyanka Khatri*

supports a client's need, often in the form of   data stores and hosted application.

Working Procedure:-

Pyramid:-

Cloud Computing- A New Reference *Anuj Kumar Bishnoi & Priyanka Khatri*
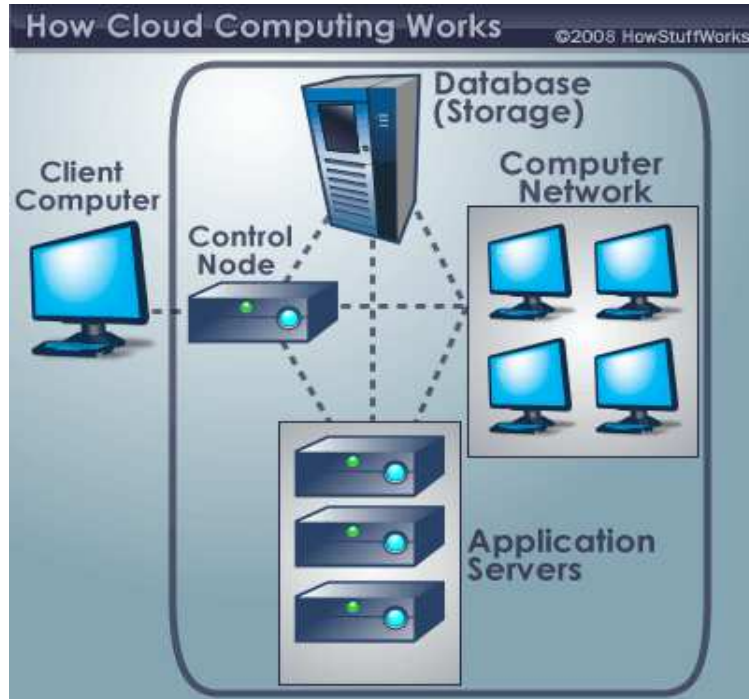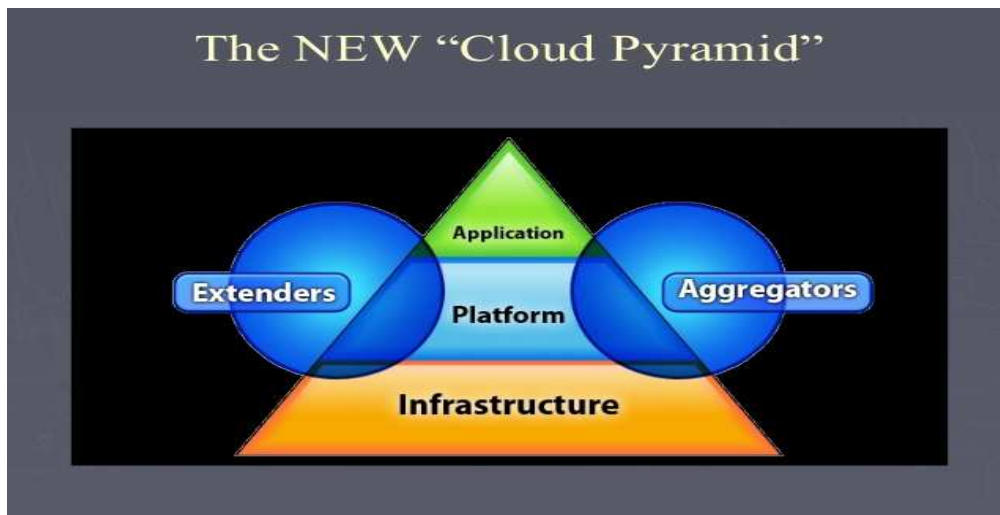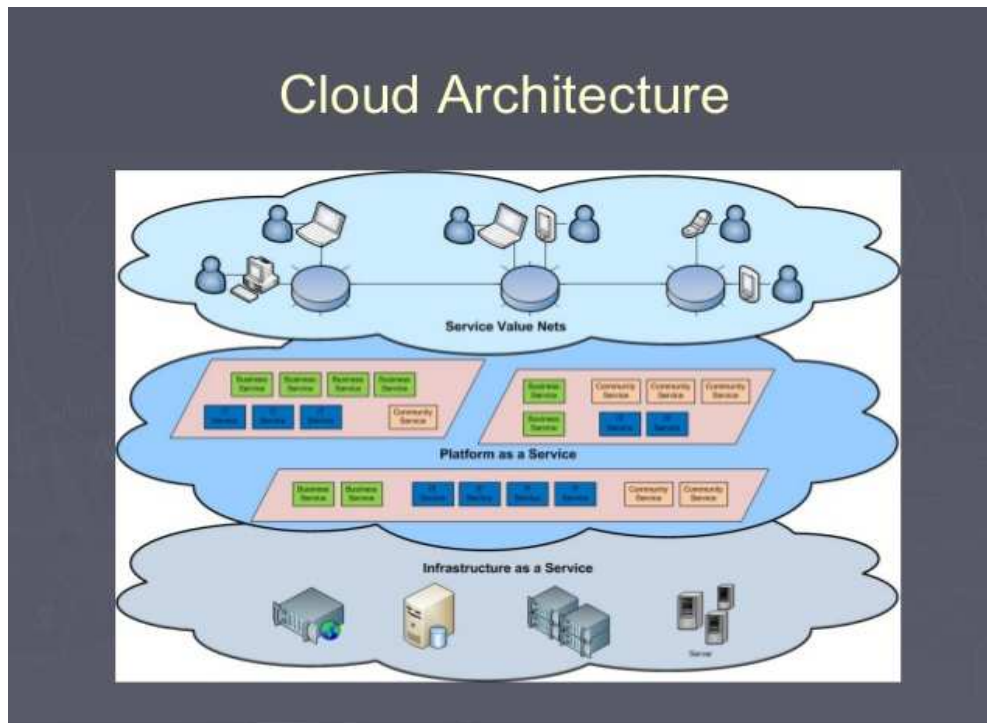
Architecture:-

Previous Work:-

In 1950's the computer concept came in to track, which started with the large-scale mainframe computers being used in academia and corporations , accessible quietly through their thin clients/terminal computers, which was rottenly referred as "static terminals", because of having no internal processing but beside this all they were used in the communications which was in great demand that time. In order to use costly mainframes, A practice was initiated which allowed multiple users to share both the physical access to the computer from multiple terminals as well as to share the CPU time. This process of eliminated periods of inactivity on the mainframe and allowed for a greater return on the investment. The practice of sharing CPU time on a mainframe became known in the industry as time-sharing.

Development of the Internet begins from document centric via semantic data towards more and more services which was illustrated as "dynamic web". This contribution focused in particular in the need for better meta-data able to describe not only implementation details but also conceptual details of model-based applications. The present availability of high-capacity networks, low-cost computers and storage devices as well as the widespread adoption of hardware virtualization, service-oriented architecture, autonomic, and utility computing have led to a growth in cloud computing.

Cloud Computing- A New Reference *Anuj Kumar Bishnoi & Priyanka Khatri*

Future Work:-

According to Gartner's Hype cycle, Cloud computing has reached a maturity that leads it into productive phase. This means that most of the main issues with Cloud computing have been addressed to a degree that Clouds have become interesting for full commercial exploitation. This however does not mean that all the problems listed above have actually been solved, only that the according risks can be tolerated to a certain degree. Cloud computing is therefore still as much a research topic, as it is a market offering. In 2012 the European Commission has issued an analysis of the relevance of the open research issues for commercial stabilization [159] in which various experts from industry and academia identify in particular the following major concerns:

- Open interoperation across (proprietary) cloud solutions at Iasi, PaaS and SaaS levels managing at large scale and in heterogeneous environments.

- Dynamic and seamless elasticity from in-house clouds to public clouds for unusual (scale, complexity) and/or infrequent requirements.

- Data management in a cloud environment is taking the technical and legal constraints into consideration for the betterment of people.

These findings have been refined into a research roadmap proposed by the Cloud Computing Expert Group on Research in December 2012 which tries to lay out a timeline for the identified research topics according to their commercial relevance. With the 8th Framework Programmers for Research and Technological Development the European Commission is trying to support the according research work along the lines of the Europe 2020 strategy.

Research Work:-

- The Academic Cloud Computing Initiative (ACCI) of year October 2001, was regarded as a multi-university project which designed to increase technical knowledge among students to address the challenges regarding of cloud computing.

- UC Santa Barbara in April 2009, released the first open source platform-as-a-service, App Scale, which is capable of running Google App Engine applications at scale on a multitude of infrastructures.

- The St Andrews Cloud Computing Co-laboratory was launched in April 2009, which focused on research in the important new area of cloud computing. Unique in the UK, St ACC aims to become an international centre of excellence for research and teaching in cloud computing

- The T Clouds (Trustworthy Clouds) project was started in October 2010, founded by the European Commission's 7th Framework Program. The project's aim is to research and inspect the legal foundation and architectural design in order to build a trustworthy cloud-of-cloud infrastructure on top of that. The project also develops a prototype to demonstrate its results.

- In December 2010, the Trust Cloud research project was started by HP Labs Singapore to address transparency and accountability of cloud computing via detective, data-centric approaches encapsulated in a five-layer Trust Cloud Framework. The team identified the need for monitoring data life cycles and transfers in

Cloud Computing- A New Reference *Anuj Kumar Bishnoi & Priyanka Khatri*

the cloud, leading to the tackling of key cloud computing security issues such as cloud data leakages, cloud accountability and cross-national data transfers in transnational clouds.

- In January 2011, the IRMOS EU-funded project developed a real-time cloud platform, enabling interactive applications to be executed in cloud infrastructure.

Advantages:-

- Cloud computing is based on sharing of resources to achieve coherence and economies of scale, similar to a utility over a network.
- At the foundation of cloud computing is the broader concept of converged infrastructure and shared services.
- The cloud also focuses on maximizing the effectiveness of the shared resources

Disadvantages:-

- Cloud computing is impossible if you cannot connect it with internet.
- Since, you use the internet to connect to both your application and documents, if you don't have an internet connection you cannot access anything, even your documents.
- A dead internet connection means no work and in areas where the internet connection is few or inherently unreliable, this could be a deal breaker.
- If you are offline cloud computing simply doesn't work.

Conclusion:-

Eventually, cloud computing is really great and some are probably already using it, either for business or for personal means.

- Cloud computing is a really cheap way for companies to have all the resources they need in once place.
- It's a much better way to spread your resources, and it becomes easier to access things from longer distances

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Cloud Computing- A New Reference *Anuj Kumar Bishnoi & Priyanka Khatri*