A REVIEW ON ANALYSIS OF DIFFERENT CLOUD SERVERS ON THE BASIS OF A SOPHISTICATED JOB SCHEDULING APPROACH

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Abstract : **The term cloud computing has come into this world as an evolution of the century. An idea to keep the entire data of a user over one server so that the user can access it from anywhere has taken a tremendous step towards the safety and security of the user's data. A cloud data centre is termed as sophisticated architecture where user's can relies over the preservations of the data from external theft. The cloud computing server has its disadvantages also. For a server to contain the entire data of millions of users in a safe manner is a hectic job. In the same manner , if a process is given to the cloud server , the way it responds is a major concern in rating up the servers for the performance evaluation. This paper focuses on the analysis of the different cloud computing platforms over different aspects and this paper also deals with the scheduling algorithms which are common for the last couple of years.**

Keywords: **Cloud Computing , Performance evaluation , Job Scheduling.**

I. INTRODUCTION

Cloud Computing is an evolutionary platform which represents all the basic requirements of a day by day user. The need of the cloud computing signifies the relevance of the security threats and the parameterized object detection of any server. With the increasing demand of security the servers are not secure enough to meet user's demand. Hence the cloud platform is designed in such a manner so that it meets all the requirement needs of the user. A cloud is consisted of three basics working environment. They are described as follows and is shown in Fig.1.

1) IAAS (Infrastructure as a Service)
2) PAAS (Platform as a Service)
3) SAAS (Software as a Service)

IAAS: IAAS stands for Infrastructure as service. It is a service which is provided by the cloud computing network to avail users with the infra required by the user. As for the example if a user would require any operating system, it would be provided by the cloud computing platform. In the same manner the user will have to pay for each and every MB of space getting used. In such a manner plagarism ends at both the sides.

PAAS: PAAS stands for Platform as a service and it is used to avail the users with the platform required. We can take the example of the .NET platform. The platform will be availed by the cloud server and again the user will have to pay for such work space.

SAAS: SAAS stands for software as a service and it covers all the software required by the user like Media Player , Job Schedulers etc.

Fig 1: Map of Cloud Computing

II. DIFFERENT TYPES OF CLOUD NETWORKS

1) *Window's Azure:* Window's Azure is a cloud computing evolutionary platform from Microsoft. The online portal for windows azure is www.windowsazure.com. The features of this cloud service platform are as follows.
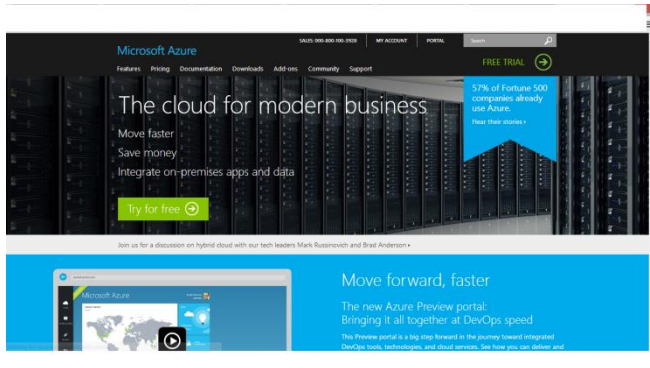

Figure 2 : represent the window's azure development portal

Azure is an Internet-scale computing and services platform hosted in data centers managed or supported by Microsoft. It includes many separate features with corresponding developer services which can be used individually or together.

Data Services provide the ability to store, modify and report on data in Azure. Benefits include manageability, high availability, high scalability, and a familiar development model. The following learning resources are available:

a) Windows Azure Storage is an overarching feature that contains 3 developer services.
  i) Blobs are used to store text which is large.
  ii) Tables can be used to store non tabular contents.
  iii) It provides a storage queue concept with the help of which the new request is amended in the queue to process everything in a smooth manner.
  iv) It uses Windows Azure database instead of relational database management system

b) It can synchronize the database with the windows azure database service.

c) There is another service called hadoop which can be integrated with windows azure.

d) It also supports hyper V with the help of which virtual machine creation becomes an easy task .To manage such services, it uses virtual machine manager.

e) It support backup and restore facility to check for the recovery in case of any failure.

f) It defines a cache memory concept due to which often used data need not to get checked from the windows azure itself.

g) Azure has a reporting facility tool which check that if any failure occurs it can directly report to the sql server.

2) *Go Daddy:* Similar like window's azure web portal, Go daddy is also cloud computing network which provides the following facilities to its end users .The main features of the Go Daddy cloud service is as follows.

Figure 3 : representing the hosing abilities of go daddy

Go Daddy is one of the major service providers in terms of the cloud services. It is cheap and one the reliable resources online. It provides a lot of facilities to the users of its domain. The key features of godaddy is as follows.

a) *Hosting service's:* Hosting refers to keeping your data as well as the web service on line. It supports the WINDOWS AZURE SERVICE as well as relational database service.

b) *Email System*: As soon as the user registers his website on go daddy, it provides an email service to the user like if the company name is SMART TECH it would

provide the user an email id package as abc@smarttech.com or abc@smarttech.in.

   c) *Integration and Migration*: Go Daddy allows the user to migrate their data from one end to another and also it allows the user to migrate its data to another server.

3) *Rackspace:* Rackspace is known for its online solutions to the user's queries regarding anything. It has a huge storage service to go through and a bunch of good services to offer. Following is list of the features of the rackspace cloud model.

Figure 4: Rackspace Architecture

Similar to go daddy, rackspace is also an emerging brand in term of cloud computing servers. The rack space provides the following architecture system service to the users.

   a) Huge Data Space

   b) Speeded Memory Utilization

   c) Integration Service

   d) Migration Services

III.   JOB SCHEDULING ETHICAL MODELS

1) *FCFS:* FCFS stands for "First Come First Serve".In this algorithm the first data which reaches to the queue first gets executed first . This algorithm is time consuming and does not perform quite efficiently when there is a case of priority in the segmentation.

2) *Round Robin Algorithm:* The round robin algorithm has an edge over the FCFS algorithm. It allocates each process or task with a time slot and after the time slot the job gets change and next jobs comes into execution. The execution results of this algorithm are better than the FCFS algorithm. There are lots of other scheduling algorithms also based on the research models. Enhancing the current scenario our proposed model goes as follows.

3) *Priority scheduling algorithm:* This algorithm discards the disadvantages of FCFS and round robin algorithm. In this algorithm a priority of each job is decided on the basis of the properties of the tasks. The priority of the task may be judged on the basis of the time consumption of the tasks or CPU scheduling burst time of the tasks.

4) *Hybrid Algorithm (FCFS + Priority)*: A previous approach called the hybrid algorithm is already presented using the FCFS and the priority algorithm. In this algorithm if the job queue has only one algorithm to be done, then it goes for FCFS algorithm but as soon as next algorithm reaches into the queue, it checks the priority of the jobs and reschedule the tasks accordingly.

5) *Critical Path Algorithm***:** In this algorithm any dependent task is executed first.

TABLE I.

Time Consumption by Different Algorithm's

Algorithm	NO.of jobs provided	Simulation time in ms	Completed jobs
FCFS	10	100	4
PRIORITY	10	100	6
HYBRID	10	100	7
CRITICAL PATH	10	100	8

IV.   CONCLUSION

This paper concludes the abilities of different cloud platforms like Window's Azure, Go Daddy & RackSpace. This paper also discusses about the features of the different cloud computing platforms and the advantages of using the cloud networks. This paper also discusses about the scheduling algorithms like FCFS, ROUND ROBIN, Critical Path Algorithms and others in the same scenario. This paper also discusses about the pros and cons of various scheduling algorithms.

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