

Result Analysis As a Web Application Using Cloud Services In Cloud Computing Environment

Pallavi Vijapure, Priynka Waghmare, Khushboo Pandey, Sonali Paul

Department of Computer Engineering, DYPIET Pimpri Pune, India

Abstract— Cloud computing is a new technology to add various capabilities to the computer without licensing new software or architecture. Products (applications) are bought, authorized and execute over network rather using desktop. It provides common commercial application online that are accessed from a web browser, while the software and data are stored on server.

Cloud Computing is mainly categorized into three services Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS), each of these services have distinct purpose and offers different kinds of products for business and individual people around the globe.

As there is a transformation from displaying information using locally installed programs towards displaying information on a browser has taken place, in this paper we are proposing a web application using cloud services which will be used for detailed result analysis for student convenience using cloud environment

Index Terms— Platform as a Service (PaaS), Software as a Service (SaaS), Infrastructure as a Service (IaaS), Browser, web application

I. INTRODUCTION

Cloud computing is also known as ‘on demand Computing’, it is one kind of internet hosted computing where resources are shared and data information is provided to the computers and other devices on demand.

In cloud computing environment cloud provides three basic services which are SaaS, PaaS and IaaS respectively; let us briefly discuss these three services.

Software as a Service (SaaS) is one type of model for software deployment. The SaaS service can provide an application on the basis of user requirements. In this service end user can access the software, install and run on their own computer and reduces burden of maintenance and support.

The second type of service in cloud computing is Platform as a Service (PaaS) in which some user can provide specific hardware and certain amount of application software as a foundation by which other users can build their applications. User needs not be bother about internal architecture of operating system, machine.

The third type in cloud computing is Infrastructure as a service (IaaS) which contains purchasing servers, software, data centric space or network equipment, the users cloud buy those resources as a fully outsourced services. Fig 1

illustrates the basic services of cloud. An end user accesses these cloud services using a web browser or software definite to the

particular application on client platform. Client platform comprises computers, laptops, tablets and mobile phones.

There are different three groups of clouds which are categorised as private, public and hybrid cloud.

Public cloud involves services that are accessed publically over a public network. It includes multiple end users who share and access multiple cloud services in common. This cloud is cheaper but has a security issue as multiple users access the same resources

Private cloud involves private network (VPN) which are limited for particular organization. Only authenticated end users of that organization can access cloud services. Private cloud is costlier but it is highly secured.

Hybrid cloud is a grouping of both public and private cloud. It uses advantages of both the clouds. These three kinds of clouds are illustrated in fig 2.

In this paper we are going to develop a web application using a public cloud for displaying students result. Many universities have implemented it, we have added some more functionalities to reduce efforts of both students and teachers.

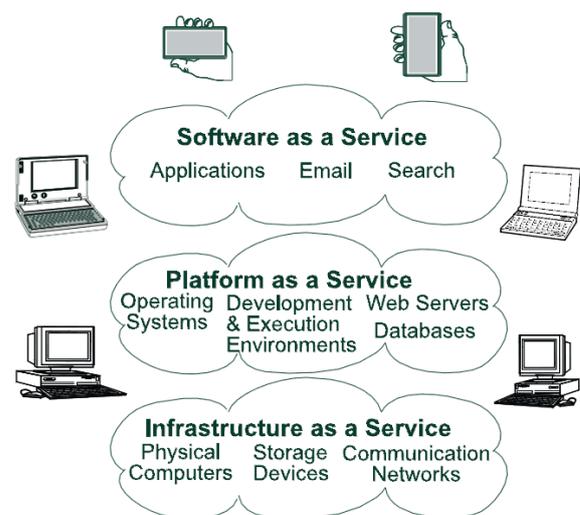


Fig 1: Basic Cloud Services

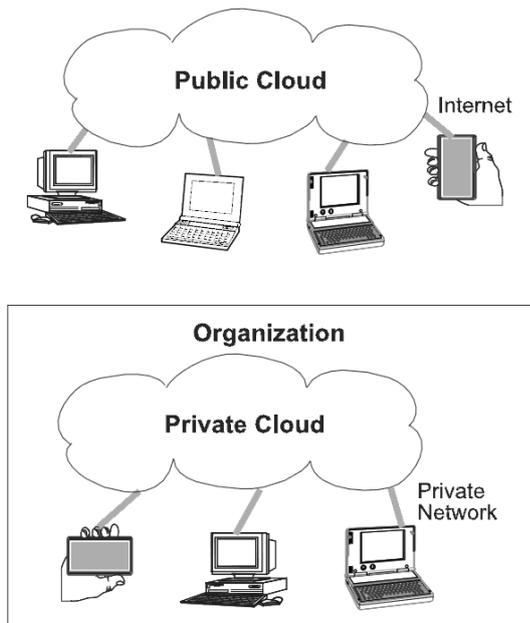


Fig 2: Different kinds of clouds

II. LITERATURE REVIEW

1. Presenting New Services in Cloud Computing Environment

Three cloud computing services mainly IaaS, PaaS, SaaS are already classified by researchers. In this paper they have proposed some more fundamental services such as InaaS, StaaS, BaaS etc, each of these services are shown with an example which is interrelated with engineering college scenario.

2. Implementation of cloud Computing on Web Application

In this paper, they have given special importance to the connection between cloud computing and web application. Also they have discussed the advantages of cloud computing and challenges and issues related to cloud computing.

3. Differentiate Between SaaS and SOA

IT professionals often used the words SaaS and SOA, many times it creates confusion. In this paper they have briefly described the difference between SaaS and SOA by using Zachman architectural model. SaaS is delivery model in which it provides services to the customers in terms of software. Owner hosts the software and user executes it on demand via the internet or intranet. In SOA model a collection of services interact with each other through standard interfaces and communication protocols.

4. A Cloud Storage Overlay to Aggregate heterogeneous Cloud Services

Many cloud services provide combine or data specific cloud storage; these cloud storage service types have the data

storage in common. This paper proposes Platform independent Cloud storage system for multiple users (piCsMu) approach by building a cloud storage overlay which sums multiple cloud storage services provides more privacy and offers a distributed file sharing system.

5. Dynamics of Cloud Based Software as a Service in Small Communities of Complex Organizations

Cloud computing software used in organizations can reduce capital costs, increase flexibility and simplify relationships with vendor. In this paper they have extended cloud based software as a service model to the small communities of complex organizations communication and considered the effects of power within each organization, vendor decision making and the evolution of user groups using an example of university administrative systems.

III. EXISTING SYSTEM

Earlier result displaying software which is used in academic institutions provided the facility to display the result either using percentage format or using CGPA format. Students having CGPA format unable to get the result in percentage format. Also it was difficult to find out department as well as class toppers, for finding it we had to compare each result so it was a time consuming and a tedious job. Many times students who get failed send their papers for the revaluation but after getting result of revaluation the record of that subject not gets updated in students database. Many times students are curious about how many marks I gained for a particular question but every time to see the marks of desired question students have to send the respective paper for revaluation and after the result of revaluation respective students can check his marks in each question so it was a very time consuming process.

IV. PROPOSED WORK

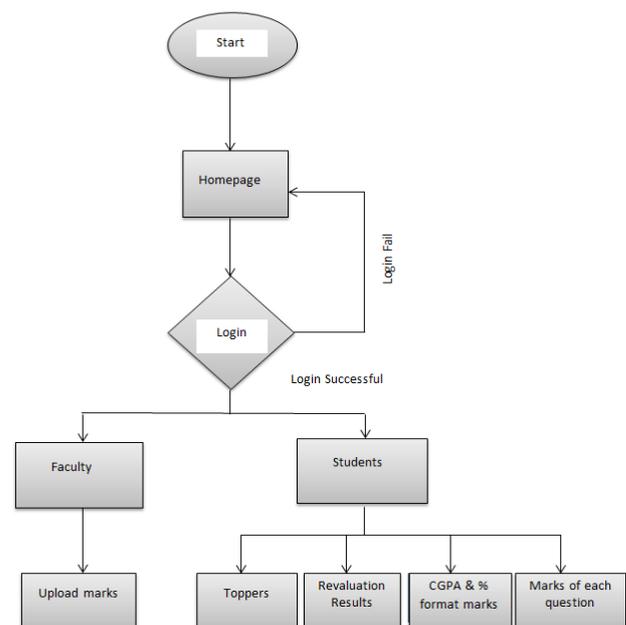


Fig 3. Flow Graph

In proposed system we are offering a new service as software in cloud computing environment. We are using Software as a service as a basic cloud service but we are also proposing Event as a Service as new fundamental cloud service. An engineering college scenario is taken as a case study. We are proposing software for displaying the results of students in a different fashion. This software shows the list of toppers as a department wise or as a class wise. Also engineering results usually shown in percentage format, but in this format we are displaying results in percentage format also and in CGPA (Cumulative Grade Point Average) format. Result of revaluation never gets updated in the list so in this software after the result of revaluation records automatically will get updated. Also we are offering a functionality in which a student can see his marks in each questions of each subject given by the examiner. There will two login sections for teachers and students respectively. In teachers login the examiner who is checking the paper will upload the marks of each question of each subject and these records will be stored in application database and on students side students can check the marks of each question. An excel sheet or a pdf file will be the input to the application the end user can see list of toppers, updated revaluation result, students also the marks of each question in each paper will be output.

V. SYSTEM ARCHITECTURE

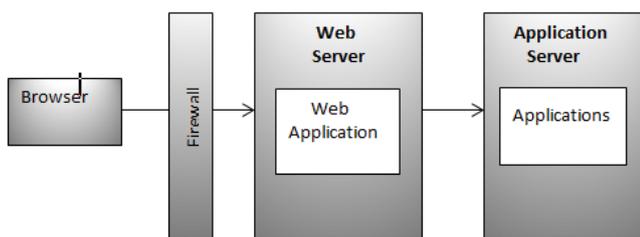


Fig 4: System Architecture

Fig shows the overflow of a web application. In this application there will be a common registration window for students and examiners, using this registration they would get userid and password and using it they would enter into the application. The examiner who is checking students paper will fill students marks in each question using students university exam number, these marks will be stored at application server, now when result get announced respective student can check his marks in each question and overall marks also. Some of the institutions displayed their results in CGPA format so it is difficult to know how much marks I exactly gained in the exam, therefore we have add a functionality in which students can get their marks either in CGPA or percentage format. students would get two options one for getting CGPA and other for percentage format. Whenever there will be result of revaluation takes place there will be automatic update of the result will be take place.

VI. CONCLUSION

Cloud computing is currently gaining popularity for sharing resources over a network from a remote place. Cloud computing has three basic services SAAS, PAAS, IAAS using these services accessing and sharing of resources takes place with the help of computers, tablets, mobile phones etc. End user access and share services and various resources using web application via browser, web applications helps end user to use services efficiently using attractive user interface.

In this paper we have developed a web application for academic institutions to show the result using some additional functionalities. This application will surely reduce the burden on student as well as teachers

VII. ACKNOWLEDGMENT

We would like to express our thankfulness to all those who gave us the possibility to complete this project. We would like to express thanks to our guide Prof. Rachna Somkunwar, for their support, and encouragement in completing this paper. They have been great supervisors in motivating us on doing high quality work and keeping us on track of progress. The other members of DYPIET faculty were equally helpful and their insights were also beneficial in our project, allowing us to engage in frequent discussions related to the topic, which helped to improve the ideas and presentation found in this paper.

VIII. REFERENCES

- [1]Anirban Kandu, Chandan Benerjee Introducing New Services in Cloud Computing Environment international journal of Digital Content Technology and its Application Volume 4,Number 5,August 2010
- [2]Liladhar R.Rewatkar,Ujwal A.lanjewar Imolemenation of Cloud Computing on Web Application International Journal of Computer Applications (0975 – 8887) Volume 2 – No.8, June 2010
- [3] J. Zhang, and J. Voas. What’s in a name Differentiate between saas and soa. IT Professional, 10(3):46–50, May-June 2008
- [4] Guilherme Sperb Machado, Thomas Bocek, Michael Ammann, Burkhard Stiller “A Cloud Storage Overlay to Aggregate heterogeneous Cloud Services” 38th Annual IEEE Conference on Local Computer Networks
- [5] Jenny Leonard “Dynamics of Cloud Based Software as a Service in Small Communities of Complex Organizations” 978-1-4799-2504-9/14 \$31.00 © 2014 IEEE DOI 10.1109/HICSS.2014.470
- [6]Prof.Chaudhari 1Ms.Sonu.A.Mathurawala2”Implementat ion of Online ERP System for Educational Institutes” International Journal of Advanced Research in Computer

Engineering & Technology (IJARCET) Volume 4 Issue 4,
April 2015

[7] Yaoxue ,Yuezhi Zhou “Apparent Computing: Spatio-Temporal Extension on Von Neuman Architecture for Cloud Services” TSINGHUA SCIENCE AND TECHNOLOGY ISSN 1007-0214 02/12 pp10-21
Volume 18, Number 1, February 2013

[8] Lifeng Zhou, Chunguang Li, *Senior Member, IEEE* “Outsourcing Large-scale Quadratic Programming to a Public Cloud” DOI 10.1109/ACCESS.2015.2505720, IEEE Access

[9] J. Chase, D. Irwin, L. Grit, J. Moore, and S. Sprenkle. Dynamic virtual clusters in a grid site manager. High Performance Distributed Computing, 12th IEEE International Symposium on, pages 90–100, 2003.

[10] Ivona Brandic, Distributed Systems Group Institute of Information Systems, Towards Selfmanageable Cloud Services. 33rd Annual IEEE International Computer Software and Applications Conference, 2009.