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# Cloud services for collaborative web based Project Management System

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***Abstract*—Cloud computing is a style of computing that is having dynamically scalable virtualized resources provided as a service over the Internet. In this paper we are presenting project management system based cloud services. In this system we are using cloud services. Lack of manageability and variant projects scope are two of the worst problems plaguing IT organizations today. Not only can these problems be costly, they can be deadly to business objectives. To compete, we need to take out uncertainty with technologies that improve definition, purpose, and scope. Our cloud based project management system provides solution for these problems .In this system we have implemented agile software development lifecycle model on cloud. The cloud based PMS will give you greater real-time insight into project requirements, and the inevitable changes of the scope that cross the boundaries of the distributed teams.**

***Keywords-component; Project management software, Software as a service, Cloud computing, Project management, SDLC***

## I. INTRODUCTION

Project management is the science (and art) of organizing the components of a project, whether the project is development of a new product, the launch of a new service. A project is not something that's part of normal business operations. It's typically created once, it's temporary, and it's specific. As one expert notes, "It has a beginning and an end." A project consumes resources (whether people, cash, materials, or time), and it has funding limits [1].

Managing a project includes:

- Identifying requirements
- Establishing clear and achievable objects
- Balancing cost, time, scope
- Adapting plan, specifications

High quality product delivers the required product, service or result within scope, on time, within budget. The relationship. Between these factors is such that any one of them changes then other will also change.

No matter what the type of project, project management typically follows the same pattern:

- Definition
- Planning
- Execution
- Control

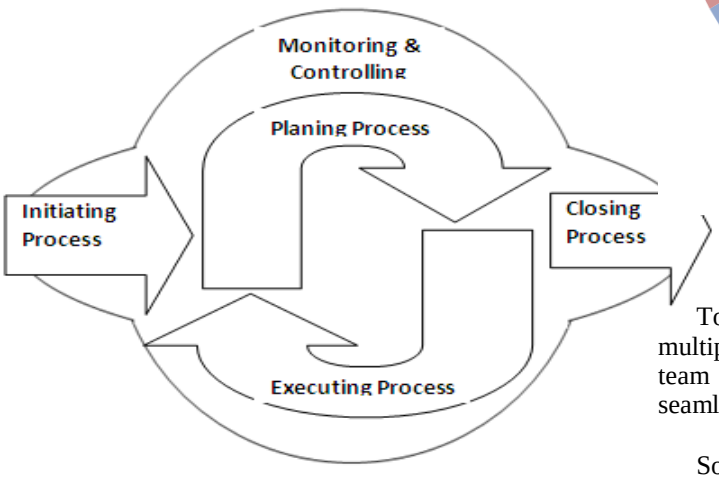


Figure 1. Standish group survey result

Standish Group, British Computer Society has done survey on success of software project in IT industry. Result of survey is below:

*1)* 31% of IT projects will be cancelled before Completion.

*2)* 52.7% of completed projects cost over their original Estimates.

*3)* 1 in 8, the number of projects that can be considered truly successful.

This result clearly shows that software project success rate is not enough and efficient. Failure of software may cause billions, which is not affordable to company in today's competitive world. If we analyze project failures we will get various reasons for it. Various reasons for project failure include lack of User Input (12.8%), incomplete Requirements & Specifications (12.3%), changing Requirements & Specifications (11.8%), and unclear Objectives (5.3%) [Shown in Figure 1.0] is much higher that other reasons. Now the question is why these factors are affecting in such large scale on project success. Globalization for many companies today, around-the-clock, nonstop design and development sounds too good to be true.

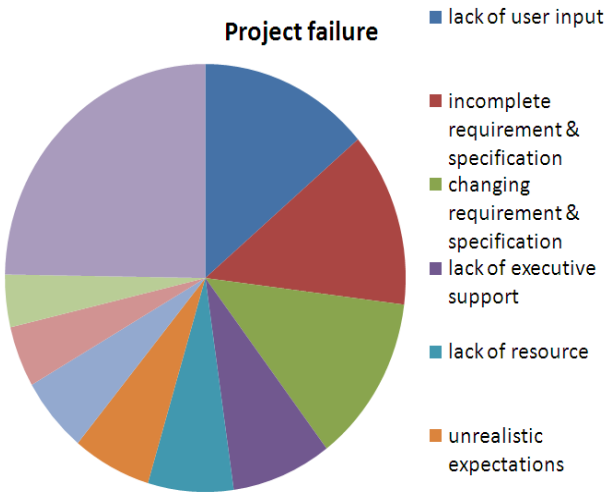


Figure 2. Standish group survey result

Today single person can work on multiple project with multiple teams, each one have different goals due to which team members have less communication which is far from seamless.

So big question is how we can make team distributed all over globe to communicate with each other and set common agenda? Another problem is client and companies are located at different places, which may lead to lack of communication between them.

Cloud based project management system will provide solution to all these problems. Cloud based project management system provide platform to user which can help all stakeholder from various level of project can actively participate in project development. Each stakeholder will have.

Its access according to his/her privilege. The cloud based PMS Solution will give you-and your team greater real-time insight into project requirements. And the inevitable changes of the scope that crosses the boundaries of the distributed teams. Cloud based PMS will help you to monitor all software development lifecycle activities like

1. Requirement Analysis
2. Prototyping
3. Design

4. Development

5. Testing

6. Documentation

7. Development

8. Maintenance

There will be transparency between client and company. Client can access information like how much work has been done on project? Whether product's features are according to client's requirements? Client can put his/her requirement any time without requiring any actually time consuming meeting with company officials. Project manager can get day by day review about project progress and problem. People from various level of software development team and client and contribute in software development procedure by giving suggestion [2]. So software product development will not remain only software developer team's work but all stakeholders will actively take part in it. So it will give collaborative environment for software development in which project failure rate is very less.

Cloud based PMS's another important feature is, it implements agile software development model. And selection of software development model is also important factors for software failure. Traditional water fall model doesn't give you success rate as agile software development model.

## II. Existing System and Its Drawbacks

There are many project management tools available in market. But none of them satisfy all requirement of user. They all have some disadvantages. Some of them are as follows.

- Existing PMS takes lots of time and effort for understanding and training staff.
- Changing and updating Tools may be complex and costly.
- Misunderstanding of Tool may lead to error and can produce misleading results and lead project manager to make wrong information decisions.
- Have to use with caution on very large and complex networked projects because you can make a change and this could affect the rest of the project and you may not be aware of the automated changes the tool makes.

Our system overcomes all above problems. We are providing PMS as SAAS (Software As A Service). So that user can use it according to their requirement. Suppose user is not satisfied with collaboration part of their existing PMS tool so they can only change Collaboration part. Because of this there is no need of changing whole system also cost of changing system reduces. Time required for training staff saved.

## III. Importance of Cloud Computing In Application

Our application is fully depends on cloud services which is important feature provided by the cloud computing. cloud computing provides scalability and many other feature which satisfy requirement of application. These features are listed below.

- *Agility*: Agile methods break tasks into small increments with minimal planning. so it become easy task and improves with users' ability to re-provision technological infrastructure resources.
- *Application programming interface*: Cloud computing allows us to use API due to which we increase reusability of component which helps in rapid development of software.
- *Cost:* Cloud technology is paid incrementally, to save organizations money.
- *Device and location independent:* enable users to access systems using a web browser regardless of their location or what device they are using (e.g., PC, mobile phone).
- *Multi-tenancy:* It enables sharing of resources across a large pool of users for allowing reasons
    - *Centralization* of infrastructure in locations.
    - *Peak-load capacity* increases.
- *Reliability* is improved, which makes well-designed cloud computing suitable for business continuity
- *Scalability* and *Elasticity* via dynamic provisioning of resources on a fine-grained
- *Performance* is monitored and consistent and loosely coupled architectures are constructed using web services.
- *Security* could improve due to centralization of data, increased security-focused resources, etc. Security is often as good as or better than under traditional systems.
- *Maintenance* of cloud computing applications is easier, since there is no need to be installed on each user's computer.

Cloud is designed to distribute IT resources in a cost-effective and nimble way. Consumption-driven cloud commerce moves an organization's focus from CAPEX (capital expenditure), which typically isn't fully utilized, to smaller, incremental and variable OPEX (operating expenditure) Organizations may overprovision to manage storage bursts or attempt to meet capacity planning, or even buy because there is budget available. These organizational efforts result in a lot of idle capacity and a longer time to

realize a return on assets (ROA). Cloud computing offers organizations dramatic increases in agility and efficiency—mandatory innovation to ensure speedy, cost-effective delivery of products and services.

It enables users to get what they need, as they need it. It can provide significant economies of scale and greater business agility. Cloud computing also yields significant cost savings in the real estate required for the data centre as well as power and cooling costs. Information management and service management initiatives, which also support your service delivery initiatives. Cloud computing represents a key technology in delivering new economics, rapid deployment of services, and tight alignment with business goals.

## IV. WHY CLOUD BASED PMS?

Cloud based project manager system provides you fast, reliable platform for software development. It will increase performance, productivity, success rate and efficiency of software development procedure. Cloud bases PMS will help organization to develop software with more collaborative manner so that explicit and implicit requirement of project will get satisfy as well as it help in proper scheduling of very complex project .All feature of system are created as web services so any person can use it to satisfy their requirement. following features are provided by cloud based project management system.

### *A. Easy Client Support and Registration:*

Cloud based PMS provides user-friendly interface so user finds it very easy to handle the system. We have separate webs service for login and registration fields. And user's username and password are store on cloud so user can access his/her account from any part of world but basic Internet connection.

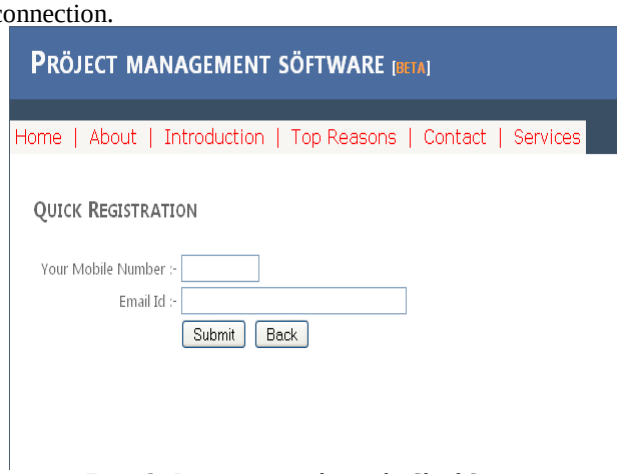


Figure 3. Registration window to the Cloud Services.

Registration of system is pretty simple by simply entering mobile number and email id. Password will get automatically created and send user by sms or mail.

### *B. Easy Data Management:*

The PMS Allows easy adding of tasks, assign users, set durations, Testing and more? All from a GUI layout that is easy to understand and use cloud based PMS provides to large space to store data about project. It will infinite and free. As data is store on cloud you access this data from anywhere in world.

### *C. Report View and Generation:*

As a manager or executive it's important to know where your projects stand. You can analyze multiple Projects with PMS Status Reports, Test rollup reports, Project group lists and much more. Cloud based PMS provides inbuilt report generation tool, which helps in report generation.

### *D. User and Project Schedule:*

Every user can define their schedule at PMS. With this information, project timelines take into consideration the schedule of the person doing the work so that team members are evenly tasked and accurate completion predictions are made [3]. The entire software Development Life cycle is distributed in the time frame with each phase in the software development life cycle having a start date and end date.

## V. CONCLUSION

Basic idea of our application is avoid the software project failure due to lack of user input, incomplete requirements & specifications, changing requirements & specifications, unclear objectives of project which usually occurs because of Lack of communication between client and remotely situated software development teams. Our application helps to provides an environment to managing change and configuration requirements and a system that is designed to give you visibility into the development process-one that will help you maintain control of the application lifecycle .Our application will provide platform for interaction between client and remotely situated teams as well as all stake holder from project can monitor project development procedure. Cloud based PMS will definitely increase productivity and success rate of software development. And important feature is, our application can provide SAAS.so user can use these services according to their requirement.

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## REFERENCES

[1] Abdullah Saeed Bani Ali "A Study of Project Management System Acceptance" 0-7695-2268-8/05 IEEE SOFTWARE, Proceedings of the 38th Annual Hawaii International Conference on System Sciences (HICSS'05) - Track 8 - Volume 08 IEEE 2005.

[2] Arthur B. Pyster, Richard H. Thayer, "Software Engineering Project Management 20 years Later" IEEE SOFTWARE Volume 22, Issue 5 (September 2005) Pages: 18 - 21.

[3] Marc Frappier, Mario Richard "SMP: A Process-Driven Approach To Project Management" 0-7695-2056-1 IEEE SOFTWARE Proceedings of the 37th Annual Hawaii International Conference On System Sciences (HICSS'04) - Track 8 - Volume 8 IEEE 2004 Page: 80253.3.