Cloud computing

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Cloud computing

The usage of ‘cloud computing’, particularly as a term can be traced back to the end of the 20th century when it was used in an internal, marked-as-confidential document of Compaq (Daylami, 2015). It partially failed to gain recognition in the next century but it has made its mark over recent years and acquired all the qualities of a widely used web service, growing its realization.

Cloud computing is one of the most debated topics of Information Technology communities and circles. It has been significantly beneficial to increase the dynamic capabilities of people exponentially over the internet without largely investing in human and capital resources. In the past, companies and businesses used to ‘outsource' or invest huge amounts of money into the bank accounts of software companies or local servers but cloud computing has almost reversed this redundant modus operandi. Local or remote servers used to charge the users even if those were not in use but cloud computing only bills the consumers when it is running which makes it preferable from a financial perspective as well.

One of the paramount definitions of ‘cloud computing’ is postulated by the ‘National Institute of Standards and Technology’ which is a leading enterprise working in the pursuit of increasing industrial competitiveness and innovation. The exegesis of cloud computing views it as a model that enables users to access a trouble-free, instant network which saves a lot of labor in the process. A vast spectrum of computing resources e.g. applications, storage services, configurable networks can get hold of this access which is ultimately extended with minimal efforts concerning management (Bohn, 2011).

This analysis was welcomed as a very instrumental contribution towards the correct understanding of ‘cloud computing’, tackling with the prevailing reluctance to define it due to the little or misleading information entailed by the term ‘cloud.’

This widely accepted definition provides scrupulous details to the consumers and users of cloud computing without any ambiguity. It depicts the availability of three models of service namely:

1. Cloud software (Software as a Service)
2. Cloud platform (Platform as a Service)
3. Cloud infrastructure (Infrastructure as a Service) (Mell, 2011)

It also encapsulates four types of deployment models describing the cloud's ability to share the services (Marston, 2011). The four models are as follows and have many similarities in their roles:

1. Hybrid cloud
2. Public cloud
3. Community cloud
4. Private cloud

Some attributes, specific to the cloud computing model are also elucidated in this definition and should be central to every cloud service:

1. On-request self-service: This feature highlights the cloud technology’s service to conspicuously reduce the user’s time cost. The users and customers don’t have to rely on the administrators for any kind of usage complexities.
2. The pooling of resources: A current need for the web computing processes is the integration and aggregation of the resources to primarily serve the requirements of more than one type of customers. This substantially lightens a major portion of the user’s workload.
3. Rapid elasticity of configuration: This entails to the consumer’s freedom from worrying about the limitation of the resources and the potential for planning. The customers can scale the resources in an increasing or decreasing manner based on their demand for the services provided by the cloud.
4. Measured service: The local and remote network servers and software companies became redundant as those were not billing and measuring the usage properly. A need for optimizing and validating the server usage arose which was duly catered by the cloud computing. Mainly, this accommodates the financial needs of users as it only measures and charges those resources which are frequently in the use of the consumer. Resultantly, there is a steep increase in the savings rate of customers.
5. Broad accessibility to network: This is a key feature regarding cloud computing whereby several virtual resources are available to a heterogeneous category of IT users. This chiefly promotes the user’s ability to access cloud storage and other services from an extensive range of devices i.e. personal computers, tablets, mobile phones etc.

This project attempts to undertake a case study towards the objective of helping the business organization in consideration to decide in the favor of adopting cloud computing to get the bottom of the business problems and find solutions to the day-to-day challenges. As cloud computing has moved from just being a ‘buzzword’ and has gained the unique status of a pervasive and wide-ranging concept in the industry of information technology, therefore the narrative of this account is to convince the said business to adopt some form of computing technology.

This project also strives to evaluate the business's concentration in the market share and provides particulars about the specific needs of an organization and the customized type of cloud computing technology, catering to those needs.

## Development of a business case

#### Executive summary

Students these days largely rely on pictorial sources, e.g. scanned documents, images, digital photos, and many other visual formats to preserve the memories of their academic lives and the unforgettable moments they experience daily. Some of the things which are of consequential importance to the students in the years they spent in schools, colleges and universities are things like:

1. First day of school, college or university
2. First best friend
3. Favorite teacher
4. First fight
5. First one to copy from the blackboard
6. First achievement
7. First favorite sport
8. First hobby to develop in the academic horizons
9. First laptop
10. First movie watched with friends in the cinema
11. First grounding by the parents
12. First suspension
13. First research premise
14. First thesis
15. First degree

Apart from these firsts, there are countless events and experiences which the students undergo and each one is close to their heart. There are many ways to capture and preserve these memories, e.g. blogging, scrap-books, journals, storing pictures in the hard-drives, and digital photos stored in compact discs. Although, all these ways are feasible by many people, yet these are not affordable by everyone in academia and a majority of students and young adults cannot cherish the memories because of a lack of visuals available.

The proposed business plan, in this case, will be named as ‘Friends Photo Studio, Inc.' and it will be largely based upon cloud computing. This plan will meet the needs of the students in the most unique way possible and will represent them in a very interesting light. Not only will be the images of a high-quality format but cloud computing will also enable the users to categorize their pictures in different files based upon the mood, lightening, events, experiences, places, familiar faces, frequent visits and much more.

Furthermore, a dynamic relationship will be established with the users which would demand them to provide the business with their up-to-date extensive photos and experiences, enhancing their need for our services.

‘Friends Photo Studio, Inc.’ initially aims to grow at a thriving rate of 35 percent by solely targeting the freshmen enrolled in the high schools of the state of Texas. Upon accomplishing first numbers of the growth, the business will be spread to students of higher degree programs and to the schools and colleges of other states as well.

This business will be a torch-bearer for other professional photography businesses and a source of great interest and aspirations as it is targeting the most dynamic segment of the society, the young generation involved in the academics.

#### Financial appraisal

The start-up expenses include:

Inventory of albums, mattes, and frames along with the long-term expenditures for cameras, lights, 2-3 laptops and electric signs to set up the shop in the business hub of Texas. The services of marketing consultants and website developers will also be required and they will be duly paid depending on their progress with the work. The total expenditure may account for up to $150,000 which is a lump-sum amount and may vary given the nature of inventory and gadgets required.

#### Business objective

This business aims to enjoy photography with the goal of keeping it simple, yet zestful and flamboyant.

#### Impact of the business

 ‘Friends Photo Studio, Inc. endeavors to include each and every student currently enrolled in the maximum number of states of America to align with the goals of inclusivity and racial diversity. In due course, any bigotry against races and all types of racial discrimination can be avoided. This will prove to be a successful impact of the business and mark it as one of its own kind in the arena of the photography businesses.

#### Market assessment

The innovative approach used by the business will help it land a distinctive status in the market and a lot of young adults from the schools and colleges are expected to approach the business with a vast spectrum of their needs of capturing various moments. Nightly backups of the data will enable the business to never lose a string of attachment with its clients and this will help to draw more potential customers.

#### Project governance

A highly committed business management team will govern the project and the business over the medium and long term. The team will have adequate knowledge of the business and all the intricacies of the facts and figures of all the enterprises involved in the business. The project governors will be effectively result oriented and they will ensure that everyone involved in the venture should produce results.

#### Progress reporting

The assumption of steady growth with a reasonable increase in clients will aid the forecasting of the progress. Besides, the key financial indicators will be evident in reporting the increment or decline in the progress of the business.

### An enterprise cloud strategy

The fundamental feature which makes this business unique from others is its incorporation of cloud computing technology. This computer age has helped the people achieve permanence in imagery (Smith, 2009), and this business is using this fact to use cloud computing as a photo backup, a sharing tool, a sales and records model and ultimately the future as the only resort for the preservation of memories.

Cameras and all types of gadgets in the possession of the students will immediately upload the images to the cloud, where they will be instantly accessible with hundreds of options for organizing, uploading on various social media, editing, enhancing, renaming and downloading. The services required by the computers and/or software applications will become obsolete.

## Cloud deployment model

Out of the four types of deployment models of cloud computing, ‘Community cloud' will be put into service for this particular business. A community cloud is best suited for the requirements of this business as it the system and all the services offered to be accessed by a particular community or organization, which is in this case, the students' community.

One of the biggest concerns of the young adults is about the security of their data and in a recently conducted study, more than 80% of the respondents expressed grave apprehensions regarding the social media big conglomerates and their policies regarding the users’ data (Pardo, 2014). Therefore, the community cloud acts as the best computing technology for this business which is chiefly driven by measures of regulation and compliance.

## Cloud service model

 The service model used would be the famously known ‘Software as a Service (SaaS).’ This model erases the need for users to run the website or mobile apps on their own. Software as a service puts an end to the expenses faced by the users which include the acquisition of hardware and maintenance of software.

This business intends to make the students’ lives meaningful by providing them with tokens of love and appreciation and the service model in consideration fully gratifies these wishes with its unique features. Software as a Service, (SaaS), is also the representation of the largest cloud market and makes it easier for enterprises to fully streamline the intricacies of their support and maintenance.

This project is not hesitant to claim that the service model, Software as a Service (SaaS) will certify as a sustainable competitive advantage for the business.

## Development, testing, and deployment of the cloud services

This will be done by a cloud service provider who would be independent in his authority. A potentially tighter control regarding governance will be offered if the business opts for an independent provider. An independent service provider will also offer a wide range of business and recruitment technologies such as the management of customer relationships and human resource management. This fits our business design in a befitting manner as the first priority of ‘Friends Photo Studio, Inc.' is our customers and their swerving needs.

## Governance policies and service agreements

Several reasons are driving the need for ‘cloud governance' which imparts policies involved in the planning, acquisition, designing, deployment and the management of a cloud computing service. Governance poses questions about the right way of things and whether or not, an individual is abiding by that right way. The dearth of cloud governance will result in security risks, the emergence of hidden clouds posing a danger to the consumers' data and a lack of incentives for potential customers to buy or use the cloud resources.

A well-elaborated strategy for guidance and future roadmap will be laid out at the start of the business. Every employee involved will have to abide by these policies. Violation of any agreements or rules will result in termination of the employee’s contract.

## Assessment and resolution of security and privacy issues

Although the pioneering technology of cloud computing aims at more efficient utilization of shared resources, yet it is brimming with risks regarding security (Seccombe, 2009). The cloud becomes a vulnerable target for hackers as breaching into its environment endangers the data and privacy of every user accessing the cloud. Almost every software has been unshielded to some degree in the past and present, which can also pave a way for the exploitation of the cloud’s arenas by some malicious users (Chen, 2012). Elements such as data and network security, data locality and integrity, authentication as well as authorization should be predominantly focused upon while development and usage of the cloud services. Besides these core values, applications of the business website present on the students' gadgets should have security measures and several back-ups and restoring options.

## Integration with existing enterprise services

Integration calls for a variety of diverse components, inside the businesses and also with the cloud service providers. Synchronization is required for data, applications, business capabilities, and management capabilities so that everything is equally accessible to every user at all times.

 Although the cloud service can itself configure and utilize standards for achieving interoperability and broad access, yet even a small amount of work done to update the extant system will reap benefits in the longer term.

In this business, integration is indispensable. In the absence of a definite strategy for integration, the quality of data declines and the vision of ‘Friends Photo Studio, Inc.’ does not conform to such possibilities.

Integration of ‘Friends Photo Studio, Inc.’ with mainstream social media such as Snap Inc., Twitter, and Threads by Instagram is also in the process and it will thrive in the wake of youth's need for connectedness and instant correspondence. All these existing social media sites also use cloud computing technologies with some variations which attribute to the true significance of cloud storage as a hallmark in the IT industry.

## Development of a Proof-of-Concept POC before moving to production

A final decision from the senior management in the workplace hierarchy is necessary before launching the business for cloud computing. The business case at hand has 2-3 people at that level of seniority and they will review everything before giving it a thumbs-up.

A team comprising of experts from the purviews of information technology, cost-benefit analysis, user satisfaction, disaster management, and big data will ensure that the proof-of-concept adheres to the production and usage criteria of the cloud service.

## Management of the cloud environment

The unerring operations and services of the community cloud will only be realizable if the cloud environment will be managed and evaluated properly, and at regular intervals.

A disaster management and recovery standard operating procedure will be defined and put into effect at the start of the business. Due to the fact that Software as a Service, SaaS is being used as the cloud service model, therefore this particular management will be the responsibility of the independent cloud service provider. The recovery process of the data will be duly ratified before launching the production service.

In ‘Friends Photo Studio, Inc.’, a comprehensive service agreement will be documented and the cloud service provider and the cloud customer will both mutually consent to it. Every problem encountered by the cloud's environment will be marked separately by its degree of complexity so that the urgency of the matter and solution may be determined by the users and the management team. Well trained individuals in the customer body, students, in this case, will verify the recovery process and its thorough completion. In case of any privacy breach or loss of data, the customers will immediately report on the complaints and suggestion forum on the cloud.

Cloud computing is a remarkable practice of the present era which is marked by big data analytics, block-chain technology and the constant need for permanence for data. Through boosting the power of the internet dramatically, cloud computing has significantly evolved the ways an individual uses his / her personal computer or mobile.

Cloud computing assists in eliminating software piracy, reducing the cost of doing business, increases individual and collective productivity, has multiple backup options and offers advancement in the career scopes. Additionally, ‘Friends Photo Studio, Inc.’ will be highly rewarding as a business venture as the application of cloud computing provides a lightning-fast performance, a feature which is extremely regarded to be of value in the current generation of students.

In the wake of its establishment and proliferation, the business case developed in this project will be greatly lucrative, amounting to the cloud computing technology employed as a chief factor of production.

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