Free research paper about security, reliability and cost of implementation of gma...

Gmail is an email service that is provided by mogul company Google well known for its browser services Google provides several internet services in cloud computing that include; Google Calendar, Google App Engine, Google Docs, Google Cloud Storage, and Gmail among others. Foremost, the choice for Gmail as a mailing service for an institution such as a university presents several security advantages. Gmail employs user passwords to ensure the security of user accounts. The passwords are integrated into the browser information that is stored in the programs files of the primary disk C of the computer. What is more the password is encrypted such that it cannot be accessed by accessing the files in disk C of the computer. As earlier mentioned Google offers several internet solutions among that is a browser dubbed Google Chrome. A user with a Google Mail Account can customize several security setting by installing the Google Chrome browser to ensure the security of their mail. Such security data is also stored in the primary hard disk of the computer under the following address; C: UsersAppDataGoogleChromeUser DataDefault, such data (passwords for Gmail account) is encrypted and allows each user to change their passwords to what they please. What is more the Gmail account sign up allows the user to gauge the security level of their passwords by notifying them of the strength of such passwords. The stronger the strength the higher the more secure a Gmail account is and vice versa. The illustration bellow shows how the technical aspects off Gmail work in storing the user passwords to mail accounts and hence ensuring the security of the Gmail user account.

Source: Boja (2011), 115.

Fundamentally, the implementation of Gmail as a mailing solution for a

university presents the advantage of ensuring that all mail accounts of students and faculty are secure. This security is achieved through the use of user generated password creation options. Through these options Gmail is able to customize passwords specific to each user. Ultimately it becomes very difficult for another individual to access someone else's account due to the inscription that is placed on the security settings that are only known to the user. The University of Bristol is one such University that has implemented the use of Gmail accounts as an e-mailing solution for its staff and its students. It does so on the platform of secure mail hosting that Gmail provides. However, this is not to imply that the university does not take additional security measures to ensure the safety of its prized records, as well as its staff's and student's mail. Additional precaution is taken to avoid identity theft and email hackers. Notwithstanding Gmail offers a secure platform for the operations of mailing services for the institution and thus its implementation in a university set up is a viable secure solution.

The second factor to be considered when implementing a Gmail service for mailing in a university set up is the reliability of the mailing service. The reliability of the mailing service is benched on the premise that Google Account holders have access to a myriad of cloud computing solutions. One such advantage that offers reliability benefits to a Gmail account holder is the capability of data replication. Database replication that is capable through the use of a Gmail account entails the creation and duplication of multiple sources of the same data base. The technology employs the use of various storage sources i. e. different servers that copy and paste the same information in various servers. Gmail through cloud computing technology

can make a Master Copy of a document and copy it to other servers that become Replicas. The master and the replicas form what is known as a replica set. Hence any changes made in the master copy is reflected in all replica sets. The reliability of Gmail's cloud computing technology is such that in the event of failure if the master server the other alternative servers may take up its role and provide the same or replica information offering Gmail users convenience. The figure below depicts data replication through the use of several serves for the storage of the information see below;

Source: Mazilu (2010), 36

Replication of information is not the only advantage that is related or concerned with reliability of operating a Gmail emailing system for a University. As a matter of fact, cloud computing comes with other benefits that incorporate the effective and efficient use of the varsity IT resources. According to Kuyoro, Ibikune & Awodele (2011) advantages of cloud computing allow the institution to access software appliances, data storage and processing power without having to invest in new infrastructure, training of personnel or licensing new software. In the end the varsity will be able to save on costs that are related to the operations of Information technology options. What is more, cloud computing presents advantages that are related to scalability, resilience, flexibility, efficiency and outsourcing of non-core activities that in turn serve to save the varsity a lot of financial resources that would otherwise have been spent making such changes in house. Further, with a Gmail service the varsity does not have to employ an Information Technology (IT) staff to partake in the maintenance of its mailing platform as cloud computing services will achieve the same purpose

flawlessly.

Lastly, the implementation of a Gmail e-mailing platform in the university is as well advantageous in cost saving. As earlier mentioned Gmail is cloud computing enabled and for this reason the company can save on costs that are related to the employment of staff in the Information Technology department to ensure that the security, the storage and the maintenance of the mailing services. Instead, the university can save on such costs through outsourcing of storage, software, and maintenance etcetera. In the end, the university will save much needed resources that can be diverted into other development initiatives. The University of Bristol in the USA is one such varsity that has implemented the cloud computing technology that has in turn ensured that the varsity saves on costs that are related to storage, software acquisition and maintenance of its Gmail accounts.

In addition, cloud computing is not the only way that Gmail will allow the varsity to save on costs. Another improvement in technological capacity that is made possible through the use of Gmail is the latest development of an internet calling platform that rivals the likes of Skype. The technology was unveiled in August of 2010 by Google and it allows Gmail account holders in the USA to make phone calls toeach other over the internet at reduced costs compared to the conventional mobile telephoning systems. Moreover, the technology works in the form of videoconferencing technology capability that allows users to visualize each other as they communicate through Gmail phone calls.

For a university setting the implementation of Gmail as a mailing service solutions for the varsity will not only save the varsity on costs related to

cloud computing but also save on costs that are used in making phone calls through mobile telephony networks that tend to be more expensive. What is more the technology also offers possibilities that allow for video conferencing that the varsity can take advantage of in teaching the students. Similarly, the varsity can save costs on telephone calls between the faculty via traditional mobile phone platforms and replace them with online solutions through the use of Gmail telephoning. In this way implementation of Gmail as a mailing option will save the varsity financial resources that would otherwise have been spent in mobile telephoning.

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