

Example of aps wa2 essay

[Business](#), [Organization](#)



Ethical considerations

The features of cloud computing as discussed previously have given rise to several ethical issues with regard to cloud computing. This section will discuss some of the ethical issues specifically associated with cloud computing.

In essence the cloud computing amounts to three developments;

- Transfer of control from technology users to third parties servicing the cloud due to outsourcing and offshoring of ICT functionality to the cloud .
- Data storage in multiple physical locations across several servers across the world owned, managed and administered by different organizations.
- The multiple service interconnection across the cloud. At the different levels functionality and service is provided by the different providers and connected to provide specific services to end users.

The mentioned developments play a major role in the following individual ethical issues of cloud computing.

- Control

The technology entails outsourcing or offshoring of the information and communication tasks to third party service providers. The users therefore place data and information and computations on the cloud where they are stored in computers and hardware that he doesn't have control. Basically, the users of cloud computing technology relinquish the control of data, computations and information to third parties. This often results in problems in case anything goes wrong since the user has no direct control of the

storage of data and computation. The risks that are associated with cloud computing technology in terms of control include unauthorized access, infrastructure failure, data corruption, unavailability among others. With such risks, it is difficult to identify responsibility for problems in the cloud, and in the absence of substantial evidence it is difficult to hold one responsible . Ethical issues with regard to control are mainly caused by the lack of clarity in IT infrastructural boundary used in cloud computing. With this technology, systems can spread over the boundaries of multiple parties and across the security perimeters that these parties have put in place. According to Jack (2012) the process has been termed as de-perimetization ' the disappearing of boundaries between systems and organizations which are becoming connected and fragmented and the same time'.

This problem not only causes obscurity in organization IT infrastructure borders but also organization accountability and responsibility. This poses a great ethical issue associated with the cloud computing technology.

- Problem of many hands

The responsibilities in cloud computing technology are divided between the customer and the provider of the service. Neither of these two parties can accurately address problems arising in the cloud computing. This eventually leads to a problem associated with many users or people being responsible for the data and computing. This basically occurs when " in a complex chain of events or systems, many people will have had a share in an action that leads to undesirable consequences. As such many people will also have had the opportunity to prevent these consequences, and therefore no-one can be held responsible."

In case something undesirable happens in cloud computing, it is difficult to find or hold someone responsible. This is due to the fact that in cloud computing, specific user depends on the system which depends on another system which in turn may depend on another system. Cloud computing service to end users is built on a framework that is serviced in the cloud by another company. The technology uses Service-oriented-architecture (SOA) where all functionality serviced by applications which can be expanded to larger applications that provide services to end users.

- Accountability

Personal data and information that is stored in the cloud needs proper management. Accountability is achieved in the cloud computing technology through transparency of storage and allocation of responsibility of data and computations in the cloud. Accountability requires detailed records of actions and activities by the users in the cloud, this could create tensions between privacy and accountability.

Thus it is important to consider what is being stored and recorded and who the records is availed to. Additionally, as mentioned earlier the de-perimetization not only affects the clarity of the organizations' IT infrastructure but also its accountability in the cloud.

- Self-determination

Information self-determination refers to the ability or right of an individual to exercise personal control over the collection use and disclosure of their personal data by others. Relinquishing control to the cloud provider raises the question of information self-determination. Due to the unlimited data sharing and storage among different organizations, self-determination is

challenged hence raising privacy issues and jeopardizes the confidence and trust in the current information society.

- Ownership

This is an issue of data and information ownership in the cloud and what the cloud providers can do with the data. In addition to the end user data that is stored in the cloud, the cloud systems also generates its own data and information mainly on users of the system. This information is not accessible to the users but poses a threat to their security and ownership of such vital information. This could result in unexpected and undesirable consequences if accessed by unauthorized personnel. However, the most common ethical issue with regard to ownership is the infringement of copyrights that is often associated with cloud computing technology. By giving customers almost unlimited access to computing power and storage, the cloud computing services could offer access to copyrighted material over the internet.

- Privacy

With cloud computing, freedom of control from the end users is taken away by the cloud service provider. As mentioned earlier, the cloud service provider stores not only the end user data but also generates data for various purposes. This could include improvement of accountability, improve performance and security. The massive data generated by cloud providers include sensitive information such as user identity, location and personal information that could be easily accessed by third parties for malicious purposes. These information could get way to unscrupulous agents who could use it for fraud or identity theft. This is a great infringement to privacy of personal data and information.

Negative and positive economic effects of cloud computing

Economic implication of cloud computing is experienced both in large scale and small scale. The impact will be substantial on both households and companies. The individual consumers can be able to access all of their documents and data from any device, as they already do for the email services or social networks. On the other hand firms can be able to rent computing power (both software and hardware) and storage from a service provider.

The most relevant economic advantage of the technology is the general reduction of the fixed costs of entry and production particularly in terms of shifting fixed capital expenditure in information technology into operative costs. This reduces the barriers to entry especially for small and medium sized enterprises, as the infrastructure is owned by the provider it needs not be purchased by the end user. This benefit results in generation of quick scalability and growth of medium and small scale enterprises.

Cloud computing can provide cost savings, it can create multilateral network effects between businesses and can promote entry and innovation in all sectors in which IT costs are restrictive and can drastically be reduced by the adoption of cloud computing. Huge cost savings can be realized especially in large public organizations and institutions such as hospitals and healthcare, education and government agencies. Additionally, positive externalities are expected particularly energy savings which may significantly contribute to the reduction of total carbon emissions.

Another more practical advantage of the technology is the compatibility, it's easier to achieve and less costly. Most of cloud computing technology

software are compatible with the dominant software in the market. The software for example glide application programs and software can run on all of the three major desktop computing platforms; Linux, Windows and Apple (Macintosh). This compatibility reduces costs incurred by users and cloud providers on startup and business automation.

The negative impacts on the economy have been attributed to the anticipated loss of employment opportunities. In the recent past there has been massive layoffs due to the use of cloud technology. Since computing and storage management can be outsourced, small scale and medium companies and enterprises have opted to lay off staff and outsource the tasks offered by these employees. However, huge companies who generate massive data and information regularly find it more expensive to outsource the storage of the data. A good example is Sony who utilize cloud computing and generate up to several terabytes of data for individual users would incur more expenses paying another company to maintain and store this data.

Reference

Bill, W. (2012). *The Economics of Cloud Computing: An Overview For Decision Makers*. Cisco Press.

Engin, B. (2012). *The Ethics of Cloud Computing*. Retrieved from Academia.edu: http://www.academia.edu/646838/The_Ethics_of_Cloud_Computing

Jack, N. C. (2012). *Security and Ethics of Cloud computing*. Retrieved from goclio: http://www.goclio.com/resources/white_papers/Security%20Ethics%20of%20Cloud%20Computing.pdf

Michael, V. (2012, July 09). *The Economic Impact of Cloud Computing*.

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