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The Acceptance of Cloud Computing for IT Workers in Thailand

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Abstract

Research had conducted a survey with a sample population of the employees working in the information Technology section in Thailand of 400 people. The research hypothesis is the relationship of knowledge factor and the acceptance of cloud computing technology features (cost reduction, time-saving, flexibility, solving technological problems, security and privacy, and reasonable service fee). The statistics used for data analysis are descriptive statistics and inferential statistics (Chi-Square). The analysis of the hypothesis found that the usability knowledge do have significant relationship with the acceptance in technological features in every aspect. The most significant relationship is noticeable in the system usability knowledge and the reasonable service fee with the weak relationship in time-saving and flexibility. The research suggests the organization to start their implementations of cloud computing by educating their employees with the theoretical and practical part of the technology. When they have enough knowledge, this should lead them to the implementation and acceptance of the system more effectively.

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Keywords: Cloud Computing; Technology Acceptance; Cloud Knowledge; Thailand

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1. Introduction

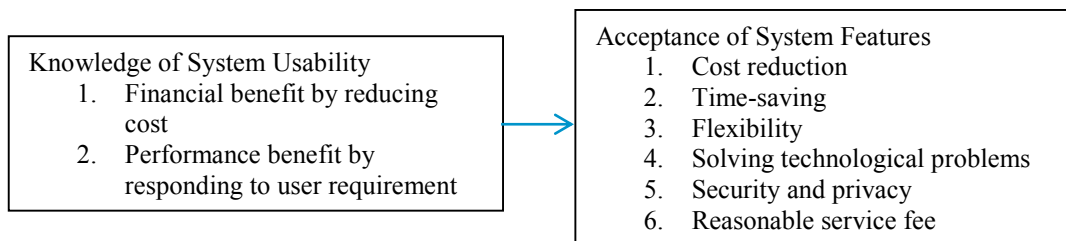
The definition of cloud computing¹ as proposed by The National Institute of Standards and Technology (NIST) is a kind of computer processing that facilitates the user to access and use system resources as needed. It is configured through the Internet². All the computer resources such as Networking, Server Computer, Storage Device, Computer Application as well as other services was offered by the service provider³. The user can easily and quickly configure various settings with little interaction from the service provider^{4,5}. The cloud computing model is characterized by the ability to access the computer system anytime, anywhere through the network^{6,7,8}. The organization could deploy cloud computing as private cloud, community cloud, public cloud and hybrid cloud^{9,10}.

The benefit of cloud computing is to reduce the investment cost of installing a computer system, human resource and license fee¹¹. It can be adjusted to meet the needs of the work quickly and conveniently. The most importantly, it can also be mobile to work anywhere with Internet^{12,13}. It is also beneficial for the organization with the uncertain storage space requirements. In addition, the data stored is also highly secure because it is stored in a shared online storage which not knows the exact location thus makes it harder to target attacks. The price is also acceptable because of the user pay at the cost of actual usage^{14,15}.

Thailand has started using Cloud computing for about 5 years, but it has not been widely accepted and used. The researcher was interested to study the relationship between IT worker knowledge and the acceptance of Cloud computing. The objective is to increase the acceptance and usage of Cloud technology in organization. The result could be used to promote the implementation of cloud computing in organization. As for the university, they can use the findings to improve their course curriculum to prepare the student to work efficiency with cloud computing in their future working environment.

2. Conceptual Framework

The research hypothesis is the relationship of knowledge factor and the acceptance of cloud computing technology features. The framework of study is shown below:



The respondents are 400 IT workers in Thailand with experience of using cloud computing in their works. The time boundary is from October 2015 to September 2016. The questionnaire has been use as a tool for collecting answers by convenient sampling.

3. Literature Review and Related Studies

In the world of changing technology like computer and information system, there is an emerging field that catches the most interest from researcher and industrial. Cloud computing is a new technology that based their resources and services on the internet platforms. The word "Cloud" means all the capacity of this technology included hardware, operating systems, applications, data storage, and all processing capacity are on the web elsewhere. As a user, we do not know exact location of those resources; we only know how easy we can use them and how much we have to pay according to the usage amount.¹⁶ The service models of cloud computing are characterized into 3 types as follows:

1. Software as a Service (SaaS); users can access the program through a web browser via any type of device¹⁷. They do not have to manually manage and control the use of resources. The system will be provided or the user may be configured in standard format. The system that provides software services can be downloaded onto a computer and instantly accessible. Example of this application is Google Doc.

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