

## Cloud Computing - Challenges Ahead for Human Resource Managers



### Human Resource Management

**KEYWORDS :** cloud computing, IT infrastructure, IT resources, HR professionals, recruitment and training.

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### ABSTRACT

*Cloud systems are often different from the traditional IT infrastructure set up by a company itself because they are normally provided by a third party supplier, and hence businesses do not have much control over the cloud system as compared to their own IT infrastructure. But, in reality, cloud computing and security goes hand-in-hand. A cloud computing facility managed by an experienced vendor can offer substantially greater security than an in-house data centre. This is because of the vendor's ability and obligation to invest continually in the security apparatus that wraps around its service delivery. The primary reason for employers making the decision of choosing a cloud-based system is because the human resource professionals can effectively process products offline, which they were once doing in-house. In terms of cloud, HR professionals also have greater challenges in their roles in the process of recruitment and training the employees in IT sector. This paper will concentrate on such issues and challenges to be faced by the HR professionals.*

### INTRODUCTION

#### Cloud computing

Cloud computing is the delivery of computing services over the Internet. Cloud services allow individuals and businesses to use software and hardware that are managed by third parties at remote locations. Examples of cloud services include online file storage, social networking sites, webmail, and online business applications. The cloud computing model allows access to information and computer resources from anywhere that a network connection is available. Cloud computing provides a shared pool of resources, including data storage space, networks, computer processing power, and specialized corporate and user applications.

#### Service Models

The cloud computing service models are Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS). In Software as a Service model, a pre-made application, along with any required software; operating system, hardware, and network are provided. In PaaS, an operating system, hardware, and network are provided, and the customer installs or develops its own software and applications. The IaaS model provides just the hardware and network; the customer installs or develops its own operating systems, software and applications.

#### STATEMENT OF THE PROBLEM

The basic two questions for this research are how will "cloud" impact IT organizations? And how will cloud impact IT employment? Obvious corollaries would be Are IT organizations "ready" to adopt public or private cloud services? And Are IT workers "ready" to work in a "cloud-enabled" world?

#### OBJECTIVES OF THE STUDY

- To study the changing roles of HR by the implementation cloud computing technology
- To study the challenges involved in the recruitment of employees in a cloud implemented organization
- To study the competitive advantages gained by the organization in a cloud implemented environment.

#### METHODOLOGY

The study is descriptive in nature.

#### Data collection and analysis

Secondary data have been used, which is already collected by other institutions like IBM, E & Y, MICROSOFT, KPMJ, TCS, ACCENTURE, ORACLE, DELOITTE, And other research entities and researchers, books and in websites. With the use of secondary data, charts and Graphs have been made use for the purpose of studying and analyzing the concept of cloud computing and its impact on role of HR managers. It provides a better understand-

ing of the same for the reader.

#### Significance of the study

There is not much empirical research on cloud computing. The present study is carried on with the help of few related studies and in the context of HR managers role in cloud computing but it contributes a accrued knowledge by studying different companies reports on cloud computing and its evolutions, contributions, implications, on different departments of the organization especially in HR section and its managers. With the outcome of the study HR managers would able to understand concept on cloud technology and in adoption in their organization and new things to existing literatures.

#### CLOUD COMPUTING AND HR

The role of HR managers in the present days is keep on changing with the new technology and changing policies with that technology. Cloud computing is one among the technology used in IT industries. Technologies are evolving faster than ever, and many of today's HR Leaders question whether current solutions are effective and seek to define ones that more strategically align with the leading technologies. The latest HR trend is to migrate myriad systems to a single, global HR solution that can help professionals better manage a widespread workforce. At the same time, HR professionals are laser-focused on selecting innovative approaches that go beyond the latest menu of "faster and cheaper" cloud-based options. Using technology to save time and Costs are not a new focus for HR teams. But there is growing interest in how cloud technology can be used to tackle routine, repeatable, transactional tasks and offer efficiencies in more strategic areas such as succession planning, engagement, retention, recruitment and a multi-generational workforce.

#### CLOUD COMPUTING TECHNOLOGY: MANAGING CHALLENGES FOR HR MANAGERS ( 1st objective)

##### a) New skills and roles for HR staff

With the implementation of HR services online, the roles of HR professionals are changing. In small organizations, the HR will need to increase technical skills and vendor relationship skills as his or her responsibility increases for managing it. In larger organizations, the HR staff will focus on more complex HR policy decisions and exceptions, many of which may have financial implications for the organization. The level of education and experience required for success in HR careers. These point the requirement of highly skilled and educated HR profession

##### b) HR distance and isolation

The implementation of a cloud technology can dramatically affect the relationship between HR staff and Employees; Employees used to working with an HR professional face to face may find it challenging to use the computer to complete tasks or answer questions. They may miss the "high touch" feeling of working with HR staff. As more HR content is made available

online and more basic administration is pushed to employees to manage, the need for personal contact between HR staff and employees is reduced. This increased distance can make it more difficult for effective communication to occur and can weaken the relationship between HR and employees. HR executives should consider the impact of this “distancing” and take measures to mitigate it.

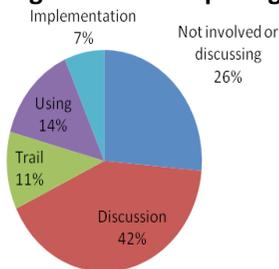
**c) Human resource Information System**

HRIS will reduce time and cost per transaction. In addition, HR staff and line employees will have access to a growing volume of data to support decision-making. Although the goal is more effective decision-making, a typical result is that decision quality does not improve measurably though time-to-decision is reduced. Another unanticipated impact of the increased use of HR technology in decision-making is that the logic behind the decision can become less transparent.

**THE CHALLENGES INVOLVED IN THE RECRUITMENT OF EMPLOYEES IN A CLOUD IMPLEMENTED ORGANIZATION (2nd objective)**

Stage  
Chart -1

**Stages of IT companies with regarding to cloud computing**



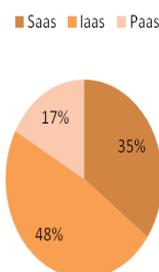
Source – Microsoft IT pro cloud survey report 2012

Data- In the above pie chart data is gathered to know how many IT companies are practicing cloud computing technology in their operations.

Interpretation – The above data clearly states that the adoption and implementation of cloud computing is just 7% .with practice of only 7% of cloud computing technology in the IT organization it is difficult to analyze the definite skills which is required for the candidates who wish to work in the cloud technology based companies and also for the HR managers .

Type of service  
Chart -2

**Type of cloud service IT companies are using currently**



Source – Microsoft IT pro cloud survey report 2012

Data - In the above pie chart data is gathered to know, what type of cloud service IT companies are using what are the skill it demands from the manpower group. And challenges for HR managers in identifying the same skills while recruitment process.

**Interpretation**

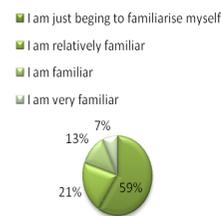
a) Software as a Service - In above chart we can notice that users of Software as a Service (SaaS) Software + Platform + Infrastructure is more up to 48% because it open up an options of virtual working (internet) . people can work from home just as easily as working in the office, as access to data .In this way cloud technology helps in reduce overheads either in regards to personnel or by offering alternate forms of working such as remote access cutting the need for large office space and associated costs..But challenges involved in it are managing employees, how are out of sight and data security.

b) Platform as a Service - PaaS Platform + Infrastructure software packages can be developed, tested and disseminated, again leveraging the benefits of virtualization and scalability. But required more skill with the manpower to deal with pre-made application, along with required software, so the PaaS service usage is 35% shown in the chart which is less than SaaS.

c) Infrastructure as a Service - IaaS Infrastructure comprises the layer of storage, hardware, servers and networking components.. Skill requirement is more IT managers need to know-how to manage virtual machines (VMS),and should able to develop their own operating system software and application ,also knowledge of configuring software stacks and script writing for cloud configuration tools like Puppet and Chef. IT professionals may have to polish their leadership and managing skills as they are called to direct and control technical support people. So it place 17% in chart.

Cloud Computing Knowledge  
Chart -3

**IT HR's knowledge of cloud computing**



Source – KPMJ Survey Report

Data – In the above chart data is collected to know the knowledge level of HR managers working in IT companies.

Interpretation – The familiarity of the HR mangers about the cloud computing is shown in the chart is very less because the following skills are required for a HR manager to work with the cloud computing technology.

Technical Skills Staff will probably need reworked technical skills. One view is that if services are not hosted onsite, less work will be required for maintenance. An alternative view is that the cloud will increase the complexity of managing services. Strong technical skills will probably still be required in managing bandwidth requirements and monitoring systems but staff will also need a greater understanding of the big picture.

Communication Skills Another staff skill set that will need further development is communication. IT staff need to understand technical information and present it in a way that nontechnical listeners can understand. Flexibility and accommodation are critical, given today’s always-on work environment, global nature, and prevalence of teamwork and collaboration. Staff must understand different cultures’ ways of working and values.

**Project Management Skills** Project management may become more complicated, with multiple partners having deliverables for a critical cloud-related project path. Project managers will need to know how to work effectively with their institutional colleagues, project staff from many institutions, and vendors, on timelines, cutover, training, status updates, and the flow of information.

**Negotiation Skills** The nature of cloud computing is fundamentally about managing contracts, relationships, and collaborations. Whether resolving disputes, producing agreement on a course of action, or bargaining for individual or group advantage, strong negotiation skills will be vital.

**Knowledge of the Law and Institutional Policies** Cloud services contracts will require guarantees and service level agreements at a higher level than typical today. Managers and staff involved in managing cloud contracts must understand such factors as the risk profile of institution and related institutional policies. This will help in deciding what services to use in the cloud and which need to remain in-house, and the pace of adoption of cloud services

**Skills for Conducting Due Diligence** The complex nature of cloud computing will require IT staff and leaders to use due diligence. Before contracting for cloud services, For example, how will institution preserve ownership of its data in the cloud? At a minimum, staff should understand the questions and to work on it.

**Creativity** Staff must be creative, envisioning and capitalizing on new opportunities. They will

Need the ability to focus on solutions, not just technologies. Originality and a capacity for brainstorming will be invaluable.

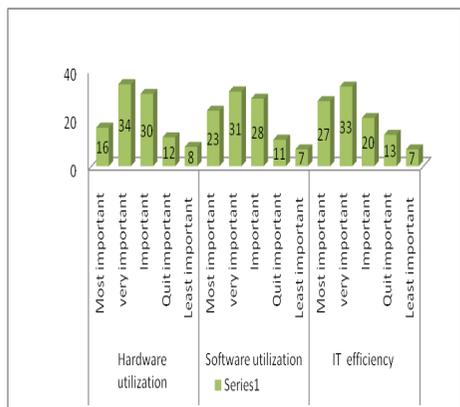
**Openness to Change** The cloud can help us be more agile in adapting to and meeting the changing needs of our customers, but it will require us to be more adaptable, too. In a cloud environment, changes come fast and regularly, and there is ongoing pressure to “keep up.” Staff must be comfortable with change, which might require extra training. As a corollary, we need to become more comfortable with failure and learn from it.

**Teamwork** The ability to work effectively in groups will take on even more importance. The cloud opens opportunities for new collaborations in higher education. Staff may need additional

Training in teamwork; managers need to recognize, reward, and model collaboration. In the above chart we find only 7% HR are familiar with cloud that shows the challenges for them with the above discussed requirement of skills and knowledge.

**COMPETITIVE ADVANTAGES GAINED BY THE HR MANAGERS IN A CLOUD IMPLEMENTED ENVIRONMENT. (3rd objective)**

**Hardware, Software, Utilization and its Efficiency with Cloud Computing Technology**  
**Chart -4**



Source – Microsoft IT pro cloud survey report 2012

**Data** – In above chart data was collected to know the benefits gained by the institution with the adoption of cloud technology

**Interpretation** – The following competitive advantages can be gain by the companies with the use of cloud computing technology.

- 1) Achieve economies of scale - Increase volume output or productivity with fewer people.
- 2) Reduction in spending on technology infrastructure. Maintain easy access to information with minimal upfront spending. Pay as weekly, quarterly or yearly based on demand.
- 3) Globalize of workforce on the cheap. People worldwide can access the cloud, provided they have an Internet connection.
- 4) Streamline processes. Get more work done in less time with less people.
- 5) Reduce capital costs. There’s no need to spend big money on hardware, software or licensing fees.
- 6) Improve accessibility. You have access anytime, anywhere, making your life so much easier.
- 7) Monitor projects more effectively. Stay within budget and ahead of completion cycle times.

**CONCLUSION**

Cloud computing technology has dramatically altered how HR services are delivered and managed by organizations. Used effectively, these systems make the HR function more efficient, better informed and better able to accurately communicate how it adds value to the organization. However, to reap the full benefits of implementation, HR executives must combine the best effective HR management processes, and they must be ready to manage the challenges created.

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