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Infotech

DIFFERENT TYPES OF
TESTING DURING CLOUD ENABLEMENT

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Functional Testing
At the first level System integration testing and user acceptance testing needs to be carried out to ensure the developed cloud meets functional and business user needs.

Non Functional Testing	
Performance Testing	Performance testing including load and stress have to be carried out ensure the developed cloud is scalable and meets end user performance requirements.
Security Testing	Security testing is very important for a cloud environment and has to be performed to ensure application and data integrity.

Compatibility & interoperability Testing
There are two angles to this. First to ensure the developed cloud works on multiple environments like browsers, OS and other software and hard ware platforms. Second to ensure the developed application is compatible with different cloud platform providers like Amazon and Go Grid.

Disaster Recovery Testing
This is another important testing activity to ensure data recovery in case of hardware/ infrastructure failures. In most cases since the applications are hosted on public clouds, companies must ensure data recovery due to emergencies.

Testing using Cloud

With the availability of massive cloud infrastructure (servers / load farms) around the globe, few companies have started leveraging them for conventional testing activities, the most prominent one being Performance Testing of Web applications using cloud infrastructure.

Performance Testing is usually associated with huge capital expenditure due to investment on tools, infrastructure and resources. But by leveraging cloud infrastructure, capital expenditure can be converted into operational expenditure. Moreover, as the number of concurrent users increase, the costs of tools also increase exponentially. Due to this, most companies do not test applications for the expected number of users, resulting in their poor performance and huge investments on building capacities.

However, by leveraging cloud infrastructure, companies can eliminate the investment on infrastructure and tools. Additionally, it also provides for geographically distributed loads, which are similar to a realworld situation, rather than tool-simulated loads.

To sum up, the benefits of Testing using Cloud are:

- Elimination of upfront investments on tools and infrastructure
- Creation of real word situations through simulation of geographically distributed load patterns
- Facilitation of on-demand Performance Testing for organizations

There are only select companies including Oakridge Infotech, who are offering solutions for both testing of cloud and testing using cloud. To offer such services, companies need a deep understanding of the cloud environment, factors affecting them like security, multi-tenancy and compatibility, and most importantly, the requirements of cloud infrastructure players like Amazon.

Road Ahead

Since cloud computing is an emerging trend across the world, service providers need to equip themselves with the necessary capabilities quickly in order to meet the demands for Cloud Testing.

The importance of Cloud Testing can also be highlighted by a study conducted by research firms -- The 451 Group and ChangeWave -- in which 1,771 corporate software buyers out of the 2,000 surveyed listed Application Testing and Development as one of the top five uses of public clouds.

According to Forrester, many leading IT vendors and organizations are betting heavily on cloud computing and are busy ramping up their capabilities in the area. Almost all Indian IT players are quickly ramping up competencies in the overall cloud computing space with the help of tie-ups with players like Amazon, Grid, Savvis, Vmware and Google. These hosting- and platform-based players themselves are being extremely proactive in pushing cloud-based deployments and are partnering with service providers to deliver end-to-end solutions.

Various analysts and technology advisory firms are of the opinion that the number of applications and the amount of content in the cloud now available to both consumers and corporations has grown to a critical mass and cloud computing is the way to go. The rate at which cloud computing is being accepted

as the new paradigm shift in the way technology is delivered and consumed, IT service providers would be remiss to ignore its huge potential just waiting to be tapped.

A cloud computing-based IT services model would make all the more sense for small- and medium-sized enterprises and would be an example of business model innovation that will set a new precedence in the IT industry.

CONCLUSION

The rapid pace, at which the cloud is being adopted by users and corporations alike, provides the next level of opportunity for IT service providers to ramp up their skills and address the demand, which is increasing by the day.

Also, testing teams should equip themselves with viable strategies to mitigate the risks and issues associated with cloud computing by covering additional capabilities available in the cloud computing environment.

AUTHOR
Mallikarjun Sanka,
CEO

ABOUT OAKRIDGE INFOTECH

Oakridge Infotech is a global technology leader delivering the solutions to our global clients. We have grown into a mature IT solutions provider delivering innovative technology solutions and services across multiple domains. We provides services and solutions spanning across Microsoft's product line to deliver improvements across the entire enterprise. We engage with customers to help unify their web assets; including social marketing, rich media and applications, search, digital marketing integration, Content management and collaboration platforms and analytics. We enable customers in engaging user experiences, cut costs, increase business agility, and deliver familiar authoring tools and processes.

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For more information, contact: info@oakridgeit.com   **www.oakridgeit.com**