Benefits of Hybrid Hosting Over Conventional Hosting

Azeem Haider Amrohi†, Ashwani Kumar††

†Department of Computer Science & Engineering, IEC College of Engineering & Technology, Mahamaya Technical University Uttar Pradesh, 201306 India
†† Department of Computer Science & Engineering, IEC College of Engineering & Technology, Mahamaya Technical University Uttar Pradesh, 201306 India

Summary
Today organizations are performing most of the work with the help of computers and internet. Online application multiplies the business of the organization with automation and accuracy. Cloud provides the solution of nonstop working of the systems and application around the world and around the clock. Organizations choose cloud as because it is very helpful in fast deployment of the application, secure access and without much more costing on computing environment. With the use of hybrid hosting organizations can take benefits of public and private cloud and get and scalable and elastic infrastructure for their dynamic modern applications. Customer can choose the deployment model according to their requirement and according to their budget.

Key words:
Hybrid Hosting, Conventional Hosting, Benefits of Hybrid Hosting / Cloud.

1. Introduction

Cloud computing is very hot buzz today. The number of industries using cloud is increasing day by day. Cloud computing basically came from telecommunication companies when the virtual private network (VPN) technologies and services were developed to provide security and lower cost in 1990s. The cloud symbol was first introduced to delimit the function or area between the provider and the users. Later, the cloud extends this boundary and covers the computing services and network infrastructure. In 1997 Chellappa first used the term "Cloud Computing" on the INFORMS.
The main concerned of cloud computing is the sharing and coordinated use of diverse resources in distributed organizations cloud, which is consisted of different, organizations and systems. Through this technology organization large-scale controlled sharing and interoperation among resources that are dispersedly owned and managed. We can build scalable cloud infrastructure in multiple data centers using dedicated and cloud servers with elasticity load balancing and cloud storage with the total control through automation and self service. With the use of cloud organization can add consistency reliability efficiency load balancing features to their infrastructure. No doubt security is a major Challenge in any cloud computing infrastructure, because it is necessary to ensure that only authorized access is permitted and secure behavior is accepted. [2]
04 (Four) Deployment models are available in the cloud environment. Customer can choose any model depending upon their requirement and budget

1.1 Private cloud

1) The entire cloud based infrastructure is used only for one customer. This is a type of Cloud hosting that is usually chosen and managed by an enterprise. In private cloud the entire cluster of Cloud servers is leased by the enterprise, which can be managed by them or the host depending on a case to case basis.
2) This is a perfect solution for businesses who wishes to use the infrastructure for carrying out companies internal operations. This type of Cloud can be considered to be most secure amongst others as there is no outsider using the cluster.
3) The enterprises can prefer to manage the cluster on their own, where the hardware management part can be taken care by the host. Hence this type of solution is charged higher where the enterprise is charged for the hosting, server, security, power, cooling and other hardware. Hence, only a large company or an enterprise can afford this type of offering.
4) Strict control and compliance can be achieved with a private cloud and the risks incurred due to third parties can be greatly reduced.
5) Scalability being the core features of Cloud can be achieved in this type of solution as well.

1.2 Public cloud

1) The cloud infrastructure is for general public or a large industry group
2) In public cloud website, files, applications, data etc. are stored over the infrastructure offered by a hosting provider. The host would charge from customer for using their resources which may

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usually be in two modes i.e. fixed monthly scheme similar to all other plans or pay-per-use model. [5]

3) In public cloud customer not required to pay an upfront cost for the hardware used.
   The essential software's are usually pre-installed and are included with the package
4) With a managed Public Cloud, users tend to enjoy multiple benefits such as on-demand technical support, expert guidance, security of our data, flexibility to upgrade or downgrade.
5) Customer gets to avail the incomparable features such as scalability and reliability.
   Few hosting providers would also offer customer choices between the technologies used over the cloud for example VMware Hosting or Hyper Cloud.

1.3 Community cloud

Several customers share the cloud infrastructure and it supports a specific community with the same concerns (e.g., resources and security requirements, policy and compliance considerations, etc). [1]

1.4 Hybrid cloud

1) Public and Private Cloud solves the requirement for both Internal as well as External solutions. But what if someone wishes to use both the types to suffice the requirements of a business? This can be achieved by opting for a Hybrid Cloud wherein some part of the information can be kept on a private Cloud while information with the least priority can be maintained over the public cloud.[6]
2) Most Hybrid Cloud solutions make use of virtual front end servers and physical database servers.
3) Virtualization techniques can be implemented over the existing infrastructure for reducing the costs and increasing the reliability.[8]
4) The designing, implementation and management of the virtual network over the existing infrastructure needs to be taken care by the enterprise, while having a public cloud from a provider can reduce your costs over employment of trained labor.

When choosing the best type of solution, we must identify the requirement of the extent of control we wish to have over our data. If we wish to keep everything on a private network, we may opt for a Private Cloud. But if we wish to keep your expenses low, choosing a Public Cloud can best suffice our requirements. Moreover, if we are too low on budget and have a limited size of data yet wish to host our files over a cloud, a Shared Cloud can be a perfect choice to suffice the requirements.

2. Benefit of hybrid hosting over conventional hosting

2.1 Meet customer demand without capital expenditure

This is the one of the most important benefit of the hybrid cloud computing environment as capability and resources can be paid according to the usage of the resources and facilities. Therefore, capital costs are reduced and replaced by manageable, scalable operating expenses. Support and maintenance cost reduced, as the support and maintenance services provided by the cloud provider. The cost of highly trained and expensive IT personnel is also minimized. Ultimately customer can reduce the large investment in computing infrastructure, capital cost, support and maintenance cost, trained IT personnel through using cloud computing as a tool.
In case of conventional hosting we have to incur capital expenditure on the infrastructure needed for the development as a result support and maintenance cost also increased. Also highly trained and expensive IT personnel are increased with the expansion of the infrastructure.[6]

2.2 Custom networking or appliance solutions

Hybrid hosting provides a Colocate a security, mail, or transcoding appliance, and connects to the cloud via a secure private network. With the use of hybrid hosting we can save our cost which we have to incur in case of conventional hosting.

2.3 Low risk to our business Application & Data

With the use of hybrid hosting user can make their data and application which are running online more reliable and accessible as and when needed. The hybrid environment provides a secure way to today's organization that are running online application and earning because of their application. Data is also very important for the organization. Hybrid hosting provides an environment in which our data is secure from the risk of the data lost in case of failure of dedicated server. Similarly applications will continuously working even in case of failure of dedicated server. Dynamic load balancing is also very important feature of hybrid hosting.
In case of conventional hosting if the dedicated server is down due to any reason the applications rely on that particular server are stop. Data might not recover in case of dangerous fault with the server such as hard disk crash

of the server. These risk covers completely with the use of hybrid hosting.

2.4 Hardware customization and compliance

A major benefit of cloud computing is the flexibility that is provided by the following:

1) Freedom from concerns about updating servers
2) Freedom from having to install software patches for updating
3) Automated provisioning of new services and technologies
4) Acquiring increased resources on an as-needed basis
5) Ability to focus on innovation instead of maintenance details
6) Device independence

Cloud service provide offer a choice among a number of computing and storage resource configurations at different capabilities and costs, and the cloud customer will have to adjust his or her requirements to fit one of those models. Resiliency can be achieved with the availability of multiple redundant resources and locations.
Such choices and flexibilities are not possible in case of conventional hosting.

2.5 Disaster Recovery

Disaster recovery in case of conventional hosting is not powerful as in case of hybrid hosting. In case of Hybrid Hosting there are compliance issues, a dedicated server, or colocation environment can be created to store data. And if certain conditions arise that leads to disaster the data will be replicated to a secondary data center. The ultimate user of the information not acknowledges that there is some problem with the original infrastructure. Disaster recovery and business continuity planning techniques are employed by the cloud provider in comparison to the local computer environment of an organization. Cloud provider employs more dynamic and skilled computer personnel who are master in the disaster recovery process. As the cloud serves to many client at the same time and resources are used by so many users at the same time hence cloud provider adopt more advance technique and skills to handle disaster recovery.[3]

2.6 Scalability

With the Hybrid hosting we can take benefit of both public and private cloud. The scope of scalability is wider in case of hybrid hosing in cloud environment. Cloud computing provides the solution according to the scale of the organization or customers. The usage of cloud can be decreased or increased according to the user requirement on demand basis. The cloud provider provides facility of scalability to the organizations as they can expand or decrease their infrastructure according to their requirement. All expansion and decrease in the cloud usage may be according to their (customer/ end user) requirement. Because the cloud provider operates on a utility model, the client organization has to pay only for the resources it is using at the time. Cloud scalability provides for remote optimization so that computing resources are organized for maximum cost-benefit.
Scalability is also possible with the conventional hosting with the limited scope.[4]

2.7 Flexibility

Hybrid hosting offers a great deal of flexibility which is essential for today's business world as information technology needs are always changing and evolving which requires changes in infrastructure. A hybrid hosting plan is an effective solution as it offers a simple streamlined data migration process that quickly delivers quality ensuring that there is no loss of productivity.
When using a hybrid solution, users can use the cloud platform to develop and test which makes the process of development much easier and more efficient. Resources are available on-demand and on a pay-per-use basis. In addition, if there are compliance issues, a dedicated server, or colocation environment can be created to store data. And if there is a disaster within the infrastructure, information will be replicated to a secondary data center to guarantee the security of data, programs, and applications. These flexibilities are not achievable with the conventional hosting. [10]

2.8 Better Data Security with backups

Security measures adopted by cloud vendors are very strict. These vendors serve a number of clients and are capable of dealing with frequent security upgrades and patches needed for the cloud security. In most cases, backups of self-hosted solutions are performed once a day. Data could be lost if a piece of hardware fails and the most recent backup is close to 24 hours old. Cloud computing providers ensures that very little data will be lost if a hardware failure occurs because backups are performed frequently. In some cases, backups are performed in real-time. [8]

2.9 Quicker Deployment

Cloud computing can shorten deployment time for business applications. Instead of the months it can take with traditional setups, it can become a matter of weeks. Having the infrastructure already in place means an application will go live much quicker. Ultimately, cloud computing will become a way of life for many

businesses. More and more companies are adopting remote solutions for their enterprise applications.
Only Hybrid hosting with service provider allows us to easily deploy dedicated servers to our cloud or connect custom dedicated servers to our cloud computing infrastructure for increased performance and flexibility. [9]

2.10 No Maintenance

Ongoing software updates and security patches are one of the most expensive aspects of a traditional in-house server setup. Skilled IT personnel to manage ongoing server maintenance also lead to increase in maintenance cost. In contrast, with cloud computing services such as take care of all maintenance requirements, upgrades and patches, are done by the cloud service provider.

2.11 Access to Data is Convenient and Continuous

Every business needs continuous, convenient access to its data. With cloud computing, no matter where a user is located or what time it is, if there's an Internet connection the user will have instant access to the company's data. [10]

3. Conclusion

Cloud computing helps the modern organization to run their application with minimum chance of failure. With the help of cloud customer can deploy their application in very short time frame but there are risk associated with it also. With the use of Hybrid Hosting in a cloud environment modern organizations take benefits of both Private and Public cloud. For non stop working of the application over the internet hybrid plays a very important role. With the use of Hybrid Hosting we can secure our data and application even if our dedicated server is down due to any reason. Infrastructure cost and maintenance cost also reduced due Hybrid hosting makes the availability criteria of the data and the application wider. Performance also increases with the use of hybrid hosting as the data is stored over the dedicated servers and the cloud server. Load balancing is also an effective feature of the hybrid cloud. The data can be easily recovered even if our dedicated application and DBMS server is down due to any reason. In short we can say hybrid hosting has so many benefits over the conventional hosting.

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Azeem Haider Amrohi is a final year student of IEC College of Engineering & Technology. His M. Tech (Computer Science) is completing in the month of July 2012. His Thesis titled "Challenges & Benefits of Hybrid Hosting". He is presently working as a Lecturer cum System Administrator in International School of Business & Media Gurgaon India. He designed an infrastructure which can be very useful for hybrid hosting. He has associated with bitsinbin Technnologyies to settle their infrastructure on cloud. The service provider was gogrid. He designed proxy cum firewall on Centos for the International School of Business & Media.

Ashwani Kumar is a Senior Lecturer in IEC College of Engineering & Technology, Greater Noida Uttar Pradesh, India. He was also associated with United College of Engineering & Technologies.