

DEVELOPMENTS IN THE DATA CENTER/MANAGED SERVICES SECTOR

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Lot has been written on the developments and trends in the data center and all roads lead to Virtualization and Cloud Computing. The economic benefits of these technologies and service models will lead to rapid adoption by enterprises.

Undoubtedly, the other trend is the seriousness towards Green IT. It is seen with most of our customers that the investments are coming under close scrutiny towards their green credentials for sustainability. The IT Operations teams are gearing up towards monitoring and reporting more meaningful data on energy usage. Also, energy efficiency has become one of the key considerations in deciding the server architecture and hardware. The benefits of the “blade” architecture – space, cost and energy efficiency – have made it one of the preferred solutions.

There will be no choice for the organizations but to adopt these new technologies and what this means to Service Providers is that there will be a new market for guiding customers and equipping them to adopt these new technologies and service models. Almost all the Service Providers have launched “advisory” services and there are customers who are ready to take advantage of the projected potential benefits of the Cloud delivery model.

With the projected growth of virtual machines, the Managed Services sector is gearing up in its own way. There is no doubt that virtualization does add complexity to the infrastructure environment. The proliferation of virtual servers is already a headache to worry about. Organizations and the Service Providers are now mitigating the well known risk of rolling out virtualization technologies without planning for the impact on operations. There is a wider realization in the industry today that the virtual environments cannot be managed like physical servers. Balanced and integrated management solutions are developed by a combination of specialized tools and operational processes.

The most visible developments in the Managed Services Sector are as below.

1. Specialized solutions for management of virtual environments

Leading Managed Service Providers (MSP's) are developing platforms of delivery that are specifically designed for managing the virtual environments and the cloud solutions. What this means is that any specialized tools / technologies that are required for the management of the virtual environments will be bundled in to the solutions that the MSP's will provide. Also, the new kinds of reports that are relevant to the virtual and cloud environments will be built in to the services – charge back, specialized capacity planning reports etc. Interfaces are being built to administer and capture information from the public clouds and integrated in to the internal tool sets and dashboards.

Therefore, the biggest change is in having a management platform that not only manages the physical environments but also the virtual environments and provide customers with a “single glass pane” view of the entire environment.

2. Specialized tools for managing virtual environments

The benefits of virtualized environments are such that there is not only the virtualization of servers, but today all the components of the infrastructure stack viz storage, applications, and desktops are being virtualized. Each successive layer of the virtualization stack adds a level of complexity to the management headache.

There has been a massive spurt in the number of new tools that are specifically targeted towards provisioning & managing the virtual and cloud environments. There are tools for monitoring, administering, enhancing availability, capacity planning, provisioning etc that work across all the major virtual environment solutions – VMware, MS, Citrix, Parallels, Oracle, Novell etc. This “technology agnostic” feature of these new tools will be leveraged by the MSP’s to maintain and reduce the costs of managing the virtual environments.

Therefore, these specialized tools are here to stay and will gain more and more popularity.

The other trend that is emerging and is significant is the adoption of “Software as a Service” (SaaS) model for some of the IT Service Management solutions. Many of our customers are actively looking at solutions where IT management software are being offered as a service rather than spending huge sums of money on owning and maintaining such solutions.

3. Fine tuning of processes

The de facto standard for IT Service Management is ITIL. Almost all the functions – Service Delivery and Support are impacted by Virtualized and Cloud environments. Take for example the Configuration Management function – we now need to distinguish and differentiate between the physical and virtual layers. Updating of CMDB is challenging due to the dynamic nature of the virtual environment. To support root cause analysis, we need to track which virtual machine was attached to which physical server at different points in time.

Already there are talks of new version of the frameworks like ITIL specifically covering the unique requirements of the virtual and cloud environments. There definitely is a scope for fine tuning the Service Operations functions when it comes to managing the virtual environments. Again, most of the leading MSP’s already recognize this and will continue to customize and fine tune their IT Service Management platforms. The Incident Management, Performance Management, Configuration Management and the Change Management functions will be the most necessary functions that need to be fine tuned with new definitions of configuration items etc.

4. Innovative Financial Models

Pricing models for a managed service differ by type of service, degree of customization and other factors such as, terms of agreement according to the SLA. The traditional financial models include seat based models, Result and SLA based, etc. Migrating to virtual and cloud environments will come with a cost. MSP's are creating financial models that offset the total migration costs and also providing customers with granular options that will help in making a business case. Depending on the layers of services within the Cloud solution – i.e; Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS), different financial models are becoming prevalent and preferred. Some of the models that have emerged and have become popular are:

- Pay per User

This model is more prevalent in the Software as a service and Platform as a service solutions. Mail services, development platforms etc are being delivered via Cloud and “pay per user” model is used.

- Pay per IT Resource

IaaS is being modeled around the Pay Per Resource model. Customers pay for the resources that they use.

- Flat rate

For large scale requirements where the fluctuations are less comparables to the baselines, the flat rate model is popular.

- Mandatory / Optional flat rate plus pay per resource

These are the variants of the Flat Rate model where there are fluctuations that are significant and need to be taken care of.

5. Automation is the mantra

Last but certainly not the least, the Automation efforts chugs along fast. Leading MSP's are investing on automation tools and projects that will help them deliver superior service levels with lesser costs. Automation of up to 60% of tasks in certain areas of infrastructure management has become fairly common in the Managed Services sector.

With Virtualization, some elements of automation have become very easy. The creation of scripts that work across the entire virtualized environments is possible and that has made the manual efforts required for management much lesser than that for physical environments.

The paradigm shift in the Cloud model is that the IT personnel are "behind" the cloud and the users are empowered to perform many tasks without the need for IT administrators / management. This "self management" has again offloaded many normal day to day tasks from system administrators.

Conclusion

Virtualization and the Cloud delivery model will continue to grow. What this means is that the IT environments will become more complex to manage. However, if Managed Service Providers and organizations are alert, agile and flexible in adopting new tools, technologies and processes, the management/ maintenance of these complex environments can be efficient than ever before.

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Prior to his present role, Deepak was Practice Head for Infrastructure Consulting Practice. Deepak has lead and taken part in a number of Infrastructure Transformation projects.



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