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# INTEGRATING HYBRID CLOUD INTO ENTERPRISE COMPUTING STRATEGIES

An executive summary of a CIO executive roundtable series held in New York City, Boston and Chicago between January 31 and February 2, 2012.

*It is not advisable to build a next generation enterprise computing strategy without first revisiting the design and capabilities of the underlying processing infrastructure.*

### Integrating Hybrid Cloud into Enterprise Computing Strategies

By

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#### Introduction

As the concept of cloud computing continues to mature at a rapid pace, the focus of discussion among senior IT decision makers across industries is shifting. CIOs have moved beyond debates over whether or not to implement cloud infrastructures in specific ways; they are exploring how the various flavors of public, private, hybrid and traditional computing environments can be mixed and matched to achieve optimal operational and financial outcomes.

This was the central theme in a series of roundtables hosted by CIO magazine and sponsored by Microsoft and AMD between January 31<sup>st</sup> and February 2<sup>nd</sup> of 2012. The series engaged the input of 26 CIOs and senior IT executives in New York City, Boston and Chicago.

Key observations expressed by the roundtable participants included the following:

- **Manage complexity of enterprise computing across the application and infrastructure layers.** While the cloud models introduce new business and technology management models for optimizing IT resources, it was noted that, often, the net result is increased complexity. New skill sets – including vendor management, product assessment and solutions integration – are needed to effectively manage this complexity. It is critical to move away from siloed thinking at the application, networking and infrastructure layers. Cloud – at the public, private and hybrid levels – create new inter-dependencies that call for inter-disciplinary technical skills. Those skills must be developed within the enterprise, but also must be reflected in the vendor community. Thus, cross platform alliances – such as those demonstrated at the roundtable series by AMD and Microsoft – are important elements in addressing this new generation of complexity.
- **Map infrastructure architecture to critical business issues.** In important ways, the go-to-market strategies and business models of some traditional enterprise application providers are out of synch with the increasingly virtualized infrastructures that organizations are now deploying. For instance, it was noted that the imperative to create more efficient CPU infrastructures are hindered by pricing structures of enterprise licenses that are based on the number of core-processors that are involved in running them. Some participants stated it was important to put pressure on vendors and discourage such practices.
- **Are there redundancies in managing hard iron, virtual, private cloud and public cloud resources?** This is a question that came up with the panelists in each of the roundtable gatherings. Similarly, there were concerns about potential degradation in performance that could affect critical applications or enterprise processes. There seemed to be a consensus emerging that performance optimization starts from the bottom up. In other words, it is not advisable to build a next generation enterprise computing strategy without first revisiting the design and capabilities of the underlying processing infrastructure. More data, more complexity, more

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movement of application puts more pressure on server and storage infrastructures. This is especially true if the infrastructure is expected to operate at significantly higher levels of utilization because of virtualization.

- **In search of a unified governance structure that covers internal, dedicated hosted and public (multi-tenant) resources.** There was general agreement that multiple computing models are going to have to coexist in most organizations for the foreseeable future. It is therefore important to develop a multi-disciplinary perspective (legal, business, financial, technical, security, etc.) to establish principled strategies which can be used to inform how and when it is appropriate to deploy different models in specific circumstances. For instance, in highly regulated environments – such as financial services and healthcare – there should be clarity at senior board-approved levels as to what data can be moved to a public cloud environment, and what should remain behind an enterprise-controlled firewall. But such policies should be the result of a nuanced discussion that takes as much advantage as possible of options that cross the full cost benefit vs. risk control spectrum. One participant made the very interesting point over the importance of implementing effective identity management in such an environment. Also, accountability strategies in a hybrid environment are critical. It is important for the enterprise to understand who is in control, who is responsible and who is accountable as data moves across a hyper-heterogeneous infrastructure.
- **Developing a strategy for Cloud-to-Cloud and Cloud-to-Legacy application integration.** A few participants raised the issue of the role standards can play to ensure data portability and interoperability across a public, private and hybrid environment.

### Conclusion

The enterprise computing environment is evolving at an increasingly rapid pace. So is the role of the IT executives who are not only responsible for managing infrastructure, but are also leveraging technology within, outside and between organizational borders to deliver value – and perhaps even differentiation – to their key constituents. The overall sentiment that seemed to accrue across the executives who participated in the series can perhaps be summarized as follows:

*It is difficult to always make the right choices in today's constantly changing technology environment. Therefore, the key to success lies beyond mastering the technical capabilities or characteristics of new computing concepts; it is in directing tasks and responsibilities to those resources that have a core competency – and an optimal risk adjusted capacity – for performing those tasks.*