On-Premises, Consumption-Based Private Cloud Creates Opportunity for Enterprise Out-Tasking Buyers

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Given the explosion of data within enterprises, the data storage industry is responding with a bevy of new products and services to meet exponential demand. In most cases, these offerings fit into two deployment models: Shared storage that resides within the provider's data center, or dedicated hardware that resides within the customer's data center.

Although shared offerings provide customers with many of the benefits of a public cloud model - especially consumption-based pricing and high levels of elasticity - significant concerns remain around security, privacy, compliance and control. The dedicated model helps to reduce concerns about security and control, but commercially, these tend to look very similar to traditional IT solutions, with high levels of capital investment coupled with long transition and transformation timelines.

Given the pace at which business data is growing, many customers cannot wait for public cloud security and control issues to be addressed; at the same time, these customers are being pressured to reduce capital expenditures and move more quickly.

This ISG white paper examines how innovative storage vendors are bringing to market new "out-tasking" deployment models that blend the best of both shared and dedicated models: on-premises, consumption-based (OPCB) services.

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EXPONENTIAL DATA GROWTH IN AN INCREASINGLY DIGITAL ENTERPRISE

The volume and variety of data being managed by enterprises is growing at a near-exponential pace. The average amount of data being managed by enterprise organizations is expected increase by 76 percent within the next 12 – 18 months, with one-third of organizations managing more than 1 petabyte by the end of 2014[1]. Concurrent with the hyper growth of data is the need to reduce cost. Business cost reduction via technology continues to be the No. 1 concern of IT management[2].

A key element to this growth pattern is the increase in new types of both structured and unstructured data: social media, clickstream, sensors and images. The emergence of advanced analytics, both traditional and predictive, creates a scenario whereby IT is expected to store all this – if not for use today, then for analysis tomorrow.

Even if IT is able to keep up with storage demands, the way data is stored continues to be highly inefficient. Multiple studies show that data access follows the 80/20 rule: The most recent 20 percent of the data attracts 80 percent of the access. Nevertheless, many IT organizations continue to pursue a two-tier data strategy in which the majority of data is stored on expensive, fast storage, and only periodically archived to disk or tape.

The dual threat of explosive demand and reliance on high-cost storage creates tremendous pressure on IT organizations that are expected to reduce costs, often dramatically, in the face of mounting business expectations.

ENTERPRISE IT NEEDS A NEW DEPLOYMENT MODEL TO MEET BUSINESS DEMAND

Given the pressure on IT to not only reduce its cost but also to reduce overall business cost, the traditional model of over-provisioning high-cost storage to meet peak demand is increasingly becoming an untenable position, due to the need for significant up-front capital investments. Additionally, this model often leaves storage capacity unused for significant periods of time, creating a scenario where limited capital sits idly by waiting to be consumed.

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[1]IDG
[2]Journal of Information Technology

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Many organizations are considering the use of a public cloud service to relieve this tension. Storage costs for public cloud services are generally cheaper than on-premises solutions[3]; however, the public cloud deployment model presents another set of challenges to potential buyers, which typically focus on three questions:

1. Who has access to our data?

2. Where is it?

3. How is it secured?

The public cloud model, by its design, abstracts the answers to these questions. A massively scaled and standardized architecture, supported by shared resources, does not want to provide deep transparency into its operations, because this is generally viewed as a strategic asset to the provider – their "secret sauce." This model works exceptionally well for consumer services (like Netflix), but given the state of play in today's enterprise IT organizations faced with an increasing regulatory environment, an abstracted set of shared resources is often viewed as not acceptable for highly sensitive data.

Therefore, privacy, data sovereignty and security concerns often eliminate public cloud offerings from consideration as an enterprise-wide deployment model to solve the underlying tension between IT and the business.

CONSUMPTION-BASED, ON-PREMISES PRIVATE CLOUDS EMERGE

Buyers are increasingly looking for a model that provides them with the flexibility of a public cloud, but with the security and control of a private cloud that resides within their own data center. Solutions are quickly emerging in the market to fill this void: Consumption-based, on-premises, managed private clouds.

In this deployment model, the supplier owns the hardware and software; the assets, however, reside inside the customer's data center, eliminating many of the concerns around privacy, data sovereignty and security. The supplier manages these assets, as well as associated service delivery, with a combination of remote, local and on-premises resources.

While remote, third-party infrastructure management (RIM) is a mature offering, the commercial and operational constructs inherent in an OPCB model is what sets it apart, resulting in "public cloud-like" benefits, including:

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[3]Forrester

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1. **Encouraging usage-based behavior** from business customers by linking consumption with billing.

2. **Faster, more efficient provisioning and de-provisioning** of hardware by relying on a supplier to install, configure and support hardware at the point in time it is needed.

3. **Lower capital expenditures** on underutilized hardware by paying for services as an operational expense when they are actually used, rather than when they are planned to be used.

4. **Improved internal capacity planning and the relationship to the business** by having a contractual commitment with the provider that requires a shared process for planning significant increases or decreases in consumption, based on business demand.

5. **Overall reduction in total cost of ownership for in-scope hardware, software and services** by using mechanisms like tiered storage to place data in the appropriate storage type.

CONSUMPTION-BASED PUBLIC CLOUD MODELS TAKE CAREFUL EVALUATION

When evaluating vendor solutions, ISG recommends customers prioritize commercial and contractual service aspects at the same or greater level than the underlying technology stack. Additionally, ISG recommends that IT work closely with business stakeholders to help them understand not only the true cost of services, but also how the consumption-based public cloud (CBPC) model can drive future return on investment.

In addition to a thorough technical assessment, OPCB buyers should focus their evaluation on the degree to which the provider uses commercial and contractual levers within their control to deliver benefits inherent in public cloud offerings in a private environment: pay-per-use, rapid provisioning and high levels of elasticity. Five key factors to evaluate for OPCB are:

1. **Asset ownership and service delivery model:** In a CBPC model, vendors may support the customer's hardware, may own the hardware themselves or both – as in the case where a customer wants to transform from a traditional operating model to a new model. ISG recommends customers strongly consider models where the provider owns and manages the hardware. While this model creates significant changes in the customer's underlying service delivery model, including governance, roles and responsibilities, and operations, it also enables customers to realize the full benefits of this emerging delivery model. Changing the focus to what is needed rather than how it is provided is increasingly viewed as a step-level change in IT maturity for commodity services.

Close collaboration needed between IT and business stakeholders.

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2. **Service levels and commitment to continuous capacity planning:** In a CBPC model, service levels are tightly aligned with capacity planning. Given that the infrastructure resides within the customer's data center, the provider cannot simply add more capacity on demand. This needs to be closely planned and coordinated with the customer, meaning that the CBPC model begins to look like an extension of the existing IT organization rather than an outsourced service. The level of maturity of the provider's process, as well as cultural fit with the existing IT team, is an important evaluation criterion. ISG recommends potential customers probe for detail on a capacity management process aligned with IT Infrastructure Library standards that allows customers, within a defined, contractually-agreed structure, to work with the vendor to plan significant increases (or decreases) in storage and or computing requirements. To realize the true value in the CBPC model, a robust and mature governance process is critical.

3. **Consumption-based pricing structure:** Vendors will generally tout a "pay-as-you-go" or "consumption-based" pricing approach, but these claims should be thoroughly evaluated to understand the implications for a specific business case. For example, vendors may charge a flat amount per month based upon an agreed amount of storage, then a rate per gigabyte, by storage tier, used above the baseline. Vendors also may offer a pure usage-based mode but expect to pay a higher unit rate for this flexibility. Additionally, customers should clearly understand what is being charged for: Allocated storage or occupied storage. Progressive vendors who have a well-defined, standardized offering with contractually-committed capacity planning will offer pricing based on actual usage, while vendors that are still maturing their offerings will offer pricing based on allocations. Buyers should thoroughly review contract terms and order forms to ensure all potential fees are accounted for.

4. **Length of commitment:** Given that the infrastructure is dedicated, customers should expect significantly longer levels of commitments than in public cloud offerings. This is even more the case when vendors agree to contractually commit to transformation (see No. 5 below). Durations can vary from months to years, which means that customers should be comfortable with the specific technology stack offered by the CBPC vendor. Converged infrastructure solutions, where compute, storage and network are combined to create a single stack, are typically used in the CBPC model.

5. **Transformation and commitment to an agreed-upon return on investment:** Leading vendors will increasingly agree to bundle the cost of transformation (moving from a legacy storage platform to the new platform) within the per-unit cost of the service, eliminating the need for any up-front project cost. Buyers need to be prepared for a thorough business

case analysis with the vendor in order to get this agreement in place. When evaluating the return on investment of the service, ISG recommends including "softer" savings as well as traditional "hard" savings. Examples include "right-sizing" of hardware upon deployment, decreases in procurement time, increased usable life of assets and, most importantly, tiered storage that allocates the right data to the most cost-effective storage tier.

ISG anticipates strong demand from customers for the OPCB deployment model.

SUMMARY

ISG anticipates strong demand from customers for the OPCB deployment model given that buyers want to take advantage of the *promise* of public cloud. The buyers are concerned, however, about privacy, data sovereignty and security, which often eliminate public cloud as a deployment model candidate for all workloads. Conversely, customers can build dedicated clouds to meet privacy, data sovereignty and security requirements; however, this approach typically results in a highly complex, capital expenditure intensive project, upon which many customers are not prepared to embark.

Although not appropriate for all ISG clients, we believe the emerging OPCB out-tasking model warrants serious consideration for clients that:

1. Place a premium on data sovereignty.

2. Do not want to release full operational control, and

3. Seek the flexibility of an operational expenditure commercial model.

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Published June 13, 2014

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Stanton helps enterprise IT and sourcing leaders rationalize and capitalize on emerging technology opportunities in the context of the global sourcing industry. He brings extensive knowledge of today's cloud and automation ecosystems, as well as other disruptive trends that are helping to shape and disrupt the business computing landscape. Stanton has been with ISG for more over a decade. During his tenure he has helped clients develop, negotiate and implement cloud infrastructure sourcing strategies, evaluate and select software-as-a-service platforms, identify and implement best-in-class service brokerage models, and assess how the emerging cloud master architecture can be leveraged for competitive advantage. Stanton has also guided a number of leading service providers in the development of next-generation cloud strategies. Stanton is a recognized industry expert, and has been quoted in CIO, Forbes and The Times of London. You can follow Stanton on Twitter: @stantonmjones.

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