Private and Public Clouds Powered by SimpliVity

Solution Brief

SimpliVity's OmniCube is the market-leading hyperconverged infrastructure platform, delivering the best of both worlds: x86 cloud economics and enterprise capabilities, including performance, data protection, data efficiency and Global Unified Management. OmniCube was designed from the ground up to support IT environments of all sizes at a global level – ideal for Service Providers and IT organizations developing private and public clouds.

"We Want to Build a 'Cloud'"

Today, IT organizations know that they need to change, but the paradox is that as the data problem increases, budgets are flat or down, ultimately hindering IT's ability to innovate. There are three different approaches that IT organizations can take when building out their cloud strategy based on varying business demands.

1. **Private Cloud**: A private cloud allows for the high performance that your business demands while still maintaining control of your environment, whether on-premises or in a hosted private cloud. Private cloud provides you with a dedicated set of infrastructure enabling your IT organization to focus less on infrastructure and more on service delivery.
2. **Public Cloud:** A typical public cloud-computing model provides infrastructure and services hosted by a service provider at off-premises data center(s), accessed over a network where resources are shared with other subscribers or tenants on a per-use subscription model.
3. **Hybrid cloud:** While all businesses are different and have unique demands, the best cloud environment varies from business to business. Many organizations require a cloud environment that is a hybrid or a combination of both public and private cloud.

What is the Cloud?

No matter the delivery model – private, public, hybrid – the cloud has the same core attributes:

1. **Self-provisioning**: As the data problem grows – capacity increasing while disk performance stagnates – organizations require automation and orchestration to keep pace with demand. Applications and resources should all be provisioned without manual intervention, enabling immediate time-to-value for end-users, and allowing IT staff to focus on more value-added activities.
2. **Elastic Infrastructure**: The primary ideals of the cloud are reduced cost and increased efficiency and agility. The infrastructure leveraged to support these ideals must be designed with a new architecture, one that scales incrementally and easily, providing immediate capacity as needs grow without large upfront capital investments.
3. **Supporting Business Model**: IT should no longer be just a cost center. It should be built to provide critical services to key stakeholders, whether internal or external. A cost structure aligned to infrastructure utilization to optimize efficient end-user behavior, and thereby automatically govern IT investment, should also be provided in the business model, To make this vision a reality, organizations must not only embrace new technology, but also a new way of doing business.

Why Cloud?

IT organizations are consistently being asked to do more with less while managing data growth and the demands of the business.

Data is Exploding

TOTAL DIGITAL UNIVERSE

40 ZB

2.8 ZB   2010   2020

Worldwide, data is growing exponentially – to 40 zettabytes by 2020, according to IDC. And enterprises and Service Providers are not immune to this "data tsunami." However, if increasing capacity were the only issue, IT administrators could simply provision more storage. Instead, the data growth challenge is compounded by the increasing complexity facing Enterprise IT.
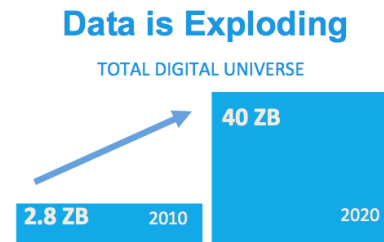
Today, IT must:
- Ensure high performance.
- Provide mobility across data centers and remote offices.
- Integrate data protection.
- Increase operational efficiency to reduce expense and maximize productivity.
- Keep compliance with policy and regulation
- Maintain security and privacy while mitigating risk
- Compete with the notion of "consumerization" of IT by the business

The reality is that the business is not slowing down even when IT struggles to keep pace – enter the challenge of Shadow IT. IT organizations and business users are forced to take matters into their own hands (Amazon Web Services, Dropbox, Google docs, etc.). This creates additional challenges for IT organizations that are trying to maintain control and security while also providing the level of services and the SLAs that the business requires.

Furthermore, the legacy infrastructure is static and over-provisioned with inflexible capital assets. Legacy infrastructure keeps IT organizations worrying about hardware and licensing, refresh cycles and support: When does my contract expire with vendor #10? What RAID controller should I select? Which network protocol should I provision for my SAN? How will I maintain the RPOs and RTOs I've promised to the business?

Common Internal Challenges Getting Started with "Cloud"

1. **Upfront Capital Expense:** Many "cloud" platforms cost between $300,000 and $1,000,000 just to get basic workloads up and running.
2. **Total Cost of Ownership (TCO):** Many "cloud" platforms only include the basic compute and storage without accounting for backup, disaster recovery, WAN costs, and management across sites.
3. **Start-up Time:** Many "cloud" platforms take weeks or months to deploy and then take weeks or months to migrate when it is time for a refresh or upgrade.
4. **Agile, Flexible and Elastic Infrastructure:** Many "cloud" or "integrated system" platforms force you to buy all or nothing at large price points, instead of letting you buy in small increments and scale overtime. In addition, because these legacy systems are generally built on monolithic, "scale-up" architectures, they are only applicable to specific bands of scale; scaling above or below these thresholds requires a different model, with a different architecture, necessitating a costly redesign and the inability to leverage existing investments as these thresholds are passed.
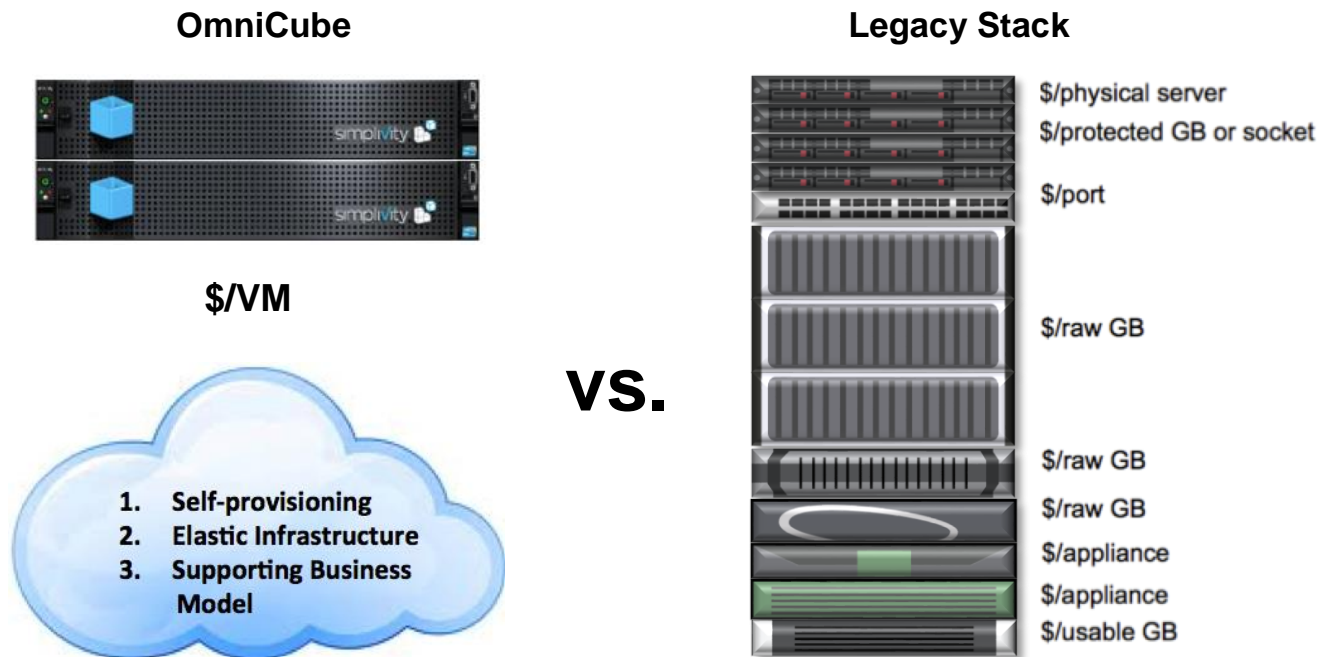
5. **Operational Expense**: Legacy infrastructure imposes the burden of manual tasks from storage to server application provisioning, deployment, upgrades, and general ongoing maintenance and does not allow IT to operate like a "cloud" with self-provisioning, automation and orchestration.

We Need a Solution

With the growing demands of the business, IT organizations need to focus on accelerating time to market, increasing revenue through innovation, reducing cost, increasing operational efficiency, and increasing employee productivity and satisfaction. Cloud computing transforms IT organizations into IT-as-a-Service organizations allowing for innovation, agility, cost economics, and increased time to market.

What is SimpliVity's Cloud?

OmniCube

$/VM

1. Self-provisioning
2. Elastic Infrastructure
3. Supporting Business Model

VS.

Legacy Stack

$/physical server
$/protected GB or socket
$/port

$/raw GB

$/raw GB
$/raw GB
$/appliance
$/appliance
$/usable GB

How is it Achieved?

1. SimpliVity's Innovative Technology:

- **Hyperconvergence:** OmniCube provides a single shared resource pool abstracting applications and VMs from the underlying hardware across not just server, storage, network, but also backup, disaster recovery, WAN optimization and cloud enablement.
- **Data Virtualization Platform**:
  - o **Accelerated, Global PreDupe**: OmniCube deduplicates, compresses, and optimizes ALL data inline at inception, once and forever, across all stages of the data lifecycle.
  - o **Global Unified Management:** Manage all resources globally from a single pane of glass, providing VM-centricity and mobility to backup, restore, and move virtual

resources—and their associated data—with a click of a button without manual efforts of the past in regards to LUNs, shares, volumes, disk groups, masking, mapping, etc.

- **Small Building Blocks:** SimpliVity enables Enterprises and Service Providers to minimize the upfront capital expense, allowing IT to buy in small increments and scale over time.

2. SimpliVity's Cloud-Enabled Business Model:

SimpliVity is uniquely positioned to deliver a private, public, and/or hybrid cloud for your organization with the SimpliVity Utility Enablement Program. SimpliVity's cloud-enabled business model allows enterprises and Service Providers to:

- Gain the best of both worlds between cost and control.
- Achieve 100% utilization of your infrastructure assets.
- Eliminate upfront investments in IT infrastructure.
- Gain Amazon-like architectural and financial flexibility, while still maintain control of data and infrastructure on-premises or in a hosted private cloud.
- Easily enable chargeback or showback for IT infrastructure per application or per VM.
- Never pay for new infrastructure before you use it.
- Align how you purchase infrastructure directly to how you're charged for it.
- Receive a truly "all-in" cost per VM, inclusive of compute, storage, backup, and WAN optimization functionality, with no hidden charges for additional utilization

Key Benefits of the SimpliVity Utility Enablement Program:

1. **Operational Efficiency:** SimpliVity maximizes the productivity of IT staff by automating mundane tasks, allowing administrators to focus on enabling new innovation, business analytics and application development. The efficiency of OmniCube can be previewed in SimpliVity's "How-to" videos which demonstrate in just 3 simple clicks how to complete several processes including: how to backup to a local or remote data center, clone a VM, create a backup policy, move a VM to a remote or local data center, or restore a backup.
2. **3x TCO Savings:** SimpliVity's hyperconverged infrastructure combines 8-12 legacy appliances into one single building block. It offers 3x TCO savings by cutting the capital expense (CAPEX) allocated to hardware and software licensing, as well as the operational expense (OPEX) from line items such as maintenance, labor, power and cooling, and bandwidth.
3. **Align IT to the Business:** Gone are the days of negotiating with 8-12 different vendors according to different metrics, contracts, and cycles. Gone is the stress and heartache of capacity planning and chargeback where administrators try to guess at infrastructure needs. Now, when you need a new VM, just pay for a new VM, via a per-VM commercial model available from SimpliVity. SimpliVity's management is at the VM-level, including not only the user interface (a plugin within VMware vCenter), but also the hyperconverged infrastructure itself.

SimpliVity for the Cloud:

SimpliVity's OmniCube is the clear choice among private, public and hybrid cloud solutions delivering cloud economics, scale and efficiency with its revolutionary hyperconverged infrastructure platform and cloud enablement features – self-provisioning, elastic infrastructure

and supporting business model. Enterprises and Service Providers alike realize several
benefits:

- **Simplicity and Agility:** Simplify and speed the process of provisioning and
  decommissioning test, development, quality assurance (QA), and production
  environments.
- **VM Centricity and Mobility:** Unified view and management via VMware vCenter for
  management and policy.
- **Efficiency:** Minimize the cost of managing separate environments with the use of
  OmniCube's Data Virtualization Platform and Accelerated, Global PreDupe, providing
  deduplication, compression and data compression of all data at inception, in real-time,
  once and forever across all stages of the data lifecycle.

SimpliVity Success Stories:

HISI, a Leading IT Services Provider, based in France, uses
OmniCube's cloud integration capabilities to enhance their
automated VM-hosting cloud service. With OmniCube, they have
improved business backup and continuity and remote and local infrastructure management.
SimpliVity's best of both worlds offering boosted HISI's performance by almost 50%.
OmniCube's inline deduplication, compression, and optimization of data eased the deployment
of new workloads, which now take less than a day.

> "*In less than a month, we deployed about 100 virtual servers with no problem and very
> good performance.*" – Thierry Petit-Perrin, HISI Founder and CEO.

Deploying SimpliVity also enabled HISI to drastically reduce their Recovery Point Objective
(RPO) and Recovery Time Objective (RTO). HISI achieved over 100:1 data efficiency and
saved up to $30,000 a year for remote data center support with SimpliVity.

HISI was the winner of the "Best of VMworld 2014 Europe: Best
Private Cloud" award for having successfully moved 150 VMs
onto SimpliVity hyperconverged infrastructure, including mission
critical applications such as Oracle, Microsoft Exchange,
Microsoft SQL Server, Microsoft SharePoint and SAP. HISI was
named the winner based on overall innovation, systems
performance improvement, cost reduction, easing the
management burden, new use in the market and improved
efficiencies and business processes.

A large Hosted Services Provider (SP) offers on-premises, off-premises
and hybrid solutions through a fully managed Infrastructure-as-a-Service
(IAAS) solution powered by SimpliVity OmniCube hyperconverged
infrastructure. This SP has a robust software-as-a-service (SaaS)
monitoring platform with thousands of devices under management with
enterprise class tools. SimpliVity's supporting business model allows over 200 clients to
consume SimpliVity via a utility pricing structure. Since partnering with SimpliVity, this hosted
services provider has been named one of the fastest growing solution providers in the last two
years by CRN, operating at the highest level of standards in data security and availability.

To read more please view customer testimonials at SimpliVity.com.