VIRTUALIZATION...

OR PRIVATE CLOUD?

VIRTUALIZATION...
OR PRIVATE CLOUD?

The cloud is all the rage these days, but figuring out where it fits and where it doesn't can be challenging. Even more challenging? Virtualization often gets confused with private cloud, and the terms are often used interchangeably. But they're not the same.

In the simplest terms, virtualization powers the cloud. So if you're already running a highly virtualized environment, do you still need a cloud? Let's look at the differences:

| PRIVATE CLOUD	VS.	VIRTUALIZATION
On-demand self-service		Not necessarily a service since IT still has to provision virtual machines
Anytime, anywhere, any device access		Available for internal customers on the network
Resource pooling		Resource pooling
Rapid elasticity to instantly meet demand		IT must provision virtual machines by installing the OS and software individually, so it doesn't necessarily scale fast
Usage and consumption analyses for chargeback		Chargebacks to other departments not based on actual usage, but on traditional budgeting

Above all, a private cloud helps to strategically advance go-to-market, which is increasingly critical for businesses that want to thrive in the face of unpredictable workloads. While virtualization is an important piece of the cloud puzzle, it is not a private cloud. It enables a private cloud by virtualizing resources.

With a private cloud, IT can capture business opportunities and offer a user experience with anytime, anywhere, any device productivity. The ability of acquiring IT capabilities on demand with a private cloud is in essence a reality of IT as a service.
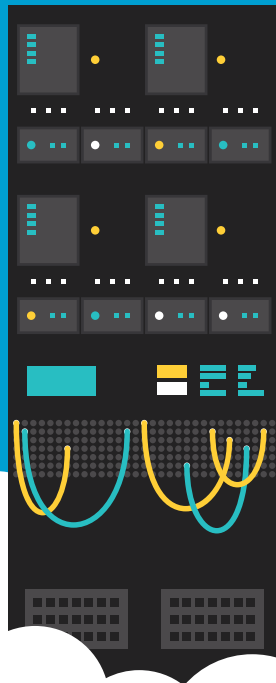
THE *VIRTUALIZATION PICTURE*

50M Number of servers in the world today [1]

60% Percentage of server workloads already virtualized [2]

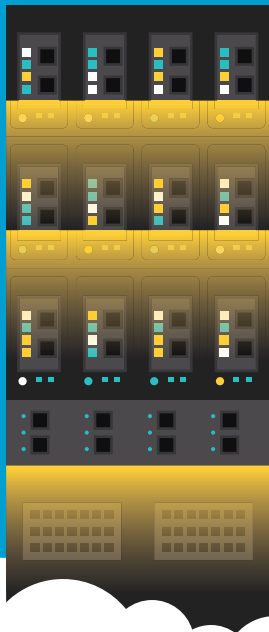[1] Source: "20 Cloud Computing Stats you Want to Know," Syntax.com, 02/10/2014.

[2] Source: "20 Cloud Computing Stats you Want to Know," Syntax.com, 02/10/2014.

GROWING VIRTUAL SPRAWL[3]

Average number of workloads per server

2014	8.5
2011	6.6
2005	3.0

THE DARK SIDE
OF VIRTUALIZATION

While virtualization creates huge efficiencies — lower costs, smaller footprint, less energy — many IT managers tend to overlook the virtual machine creep that can occur over time and lead to the costly and complex infrastructure they thought they left behind.

[3] Source: "Automation and Orchestration Drive Virtualization into Private Clouds," Insight/TechTarget white paper, 2014.

PRIVATE CLOUD
STILL FACES SOME RESISTANCE

With all of the positive benefits of moving to a private cloud, there are still some challenges, particularly within the IT department which sees a private cloud initiative as decreasing their value. Re-focusing the IT team on strategic business initiatives and providing necessary training can help allay their fears.

In addition, while cloud initiatives typically provide significant long-term savings, a private cloud requires an initial investment into the IT infrastructure so that it has the resources needed to accommodate IT as a service. A service-based IT function can help re-coup costs with a chargeback structure, but the CIO will have to work closely with the CFO to determine how move in that direction.
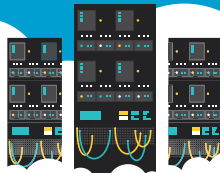
SHIFTING IT TERRAIN

The global cloud computing industry growth rate is currently 5 times higher than the global IT growth rate.

5X

FIVE STEPS TO A PRIVATE CLOUD

1 STANDARDIZATION
- Network
- Server/Storage
- Virtualization

2 CONSOLIDATION
- Facilities
- Server/Storage
- Hypervisors

3 VIRTUALIZATION
- Server
- Storage
- Application

4 AUTOMATION
- Provisioning
- Monitoring
- Reporting

5 ORCHESTRATION
- Self-Service Portal
- Chargeback/ Show Back
- Reporting

PRIVATE CLOUD MODELS

- **Private Cloud** — You own and manage the infrastructure.

- **Managed Private Cloud** — You own the hardware, but a third-party provides management and support.

- **Hosted Private Cloud** — A host provides and manages the infrastructure.

- **Virtual Private Cloud** — A host provides and manages the infrastructure via secure, multi-tenant hardware.

FROM TRADITIONAL DATA CENTER
TO PRIVATE CLOUD

There are five steps in the migration to private cloud:

1. STANDARDIZATION
2. CONSOLIDATION
3. VIRTUALIZATION
4. AUTOMATION
5. ORCHESTRATION

The first three are focused on preparing the data center to support a private cloud. Many organizations are reaping the benefits of increased flexibility and efficiency after standardization, consolidation and virtualization of their data center. They also appear to be moving cautiously along the private cloud migration path and analyzing the costs/benefits of a full private cloud implementation.

PRIVATE CLOUD GROWTH

According to IDC, the global market for private cloud computing is expected to increase by 60% and reach $12 billion by 2014, and approximately 44% of companies consider implementing a private cloud solution.[4]

[4] Source: "Common Challenges of Private Cloud Implementations," CIO.com, 09/09/2013.

THE FINAL TWO PIECES
OF THE PRIVATE CLOUD PUZZLE

Without the final two steps to a private cloud migration – automation and orchestration –
even highly virtualized environments cannot deliver the power of a private cloud.

- **AUTOMATION** – Transforms migration, provisioning, and deprovisioning of workloads,
  resources, and applications from days or weeks to mere minutes. This is accomplished through
  standardized service menus and templates that speed service delivery and increase compliance
  enforcement while reducing manual intervention.

  Automation also transforms end-to-end monitoring of performance and service-level
  agreements. Provisioning is policy-driven, reporting and analytics are built in, and the stage is
  set for self-service capabilities.

- **ORCHESTRATION** – Powers the self-service portals, allowing end-users to choose services and
  resources from a catalog, and rapidly provision those services using a browser. You can also
  customize self-service portals to make them extremely friendly to users.

  Orchestration also powers consumption-based metering and capacity planning, so you
  track who uses which resources, improving resource optimization and permitting usa
  chargeback/showback.

Finally, orchestration powers the cloud integration that spans applications and
infrastructures, including public clouds, so workflows and configurations can be
standardized, corporate policy can be consistently applied, and the entire service/resource
lifecycle can be managed.

Together, cloud automation and orchestration — along with the user interface — deliver:

- Application and resource self-service for end users.
- Ultra-fast provisioning for extreme business agility and increased IT productivity.
- Automated, policy-based monitoring to tame virtual machine sprawl.
- Tools that can re-claim underutilized resources and track resource requests and fulfillment.
- Opportunities for chargeback/showback.
- Consistent enforcement of security policy.
- Utility-based resource consumption.

BENEFITS OF A PRIVATE CLOUD

- *Increased IT agility*
- *Improved employee productivity*
- *Accelerated business-IT alignment*
- *More consistent IT governance*

- *Enhanced asset utilization*
- *Improved service levels*
- *Consistent implementation of best practices*
- *Lower service delivery costs*

INSIGHT:
YOUR TRUSTED CLOUD PROVIDER

Insight knows technology. As a trusted IT partner, we deliver IT services and solutions our clients need — whether on site, in the field or in the cloud. We have been helping hundreds of clients gain the cloud IT advantage since 2005 and currently manage more than 2 million users in businesses across diverse industries. We can help you reach your cloud computing goals.

INSIGHTCOUD DELIVERS:

- Broad portfolio of best-in-class cloud providers
- Expertise in cloud solutions (Cisco Certified Master Cloud Builder)
- Aggregated contracts/billing across multiple cloud solutions
- 24/7 support
- Rich integration services

ABOUT INSIGHT

Insight is a trusted technology provider of hardware, software and service solutions to business and government clients in more than 190 countries.

LEARN MORE ABOUT HOW INSIGHT CAN HELP YOU MOVE TO A PRIVATE CLOUD.
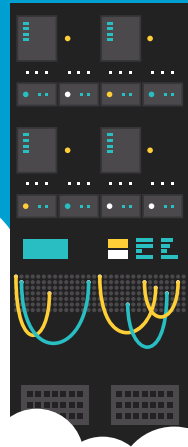
WHITE PAPER: *Automation and Orchestration Drive Virtualization into Private Clouds*

Insight®