Where in the Cloud are You?

Session 17032
Thursday, March 5, 2015:
1:45 PM-2:45 PM
Virginia (Sheraton Seattle)

#SHAREorg

SHARE is an independent volunteer-run information technology association that provides **education**, professional **networking** and industry **influence**.

Abstract

- The goal of this session is to understanding what is meant when we say “Where in the Cloud are you”.
- This session will focus on how the Cloud has formed and how business are beginning to look and use it to their managerial and financial advantage.
- What ?’s you should be asking when you start the journey into the “Cloud”.

Learning Objectives

On completion of this session participants will be able to…

- Understand Cloud Infrastructure and Cloud Resources.
- Identify the benefit of the Cloud (Network Infrastructure and Network Information and Management).

Agenda

Cloud:

What does it represent?

Technical Overview!

What to Know ?

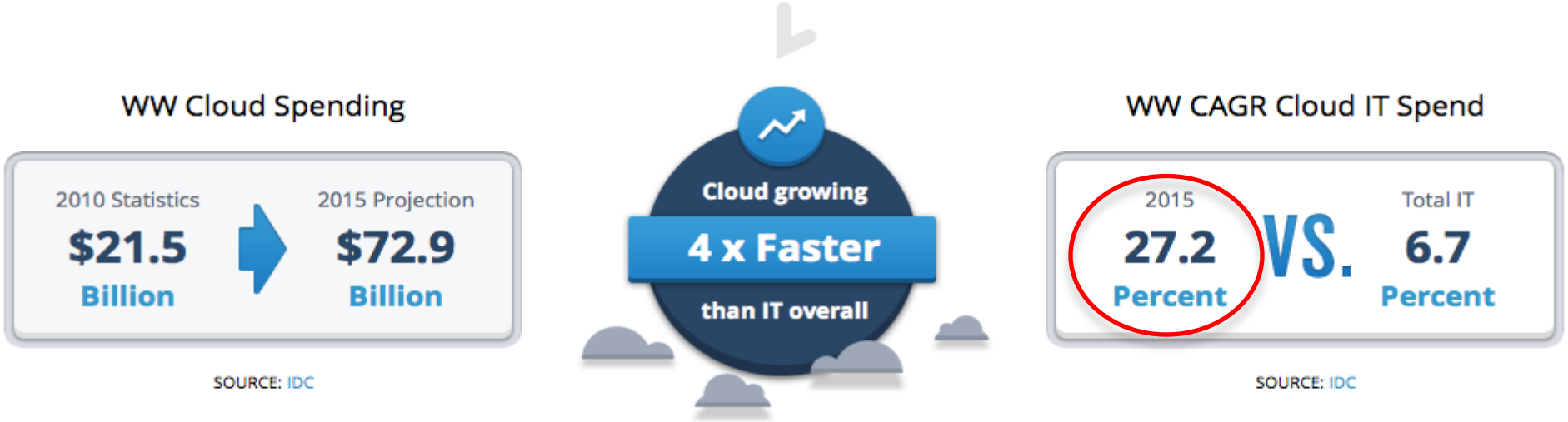
Agenda

Cloud:

What does it represent?

World of many clouds

The Growth of Spending on Cloud Services Reflects This

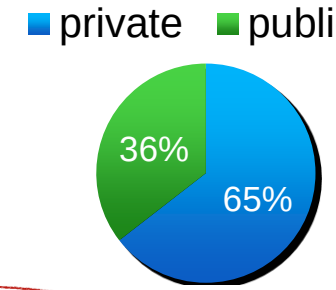


"...The Cloud is part of a larger IT industry transformation (along with mobile, wireless, social and big data). The last time the industry went through a major growth platform shift was around 25 years ago with the advent of the PC (and related technologies)" (Source IDC, Oct 2012)

Intent to Adopt More Cloud Is Strong

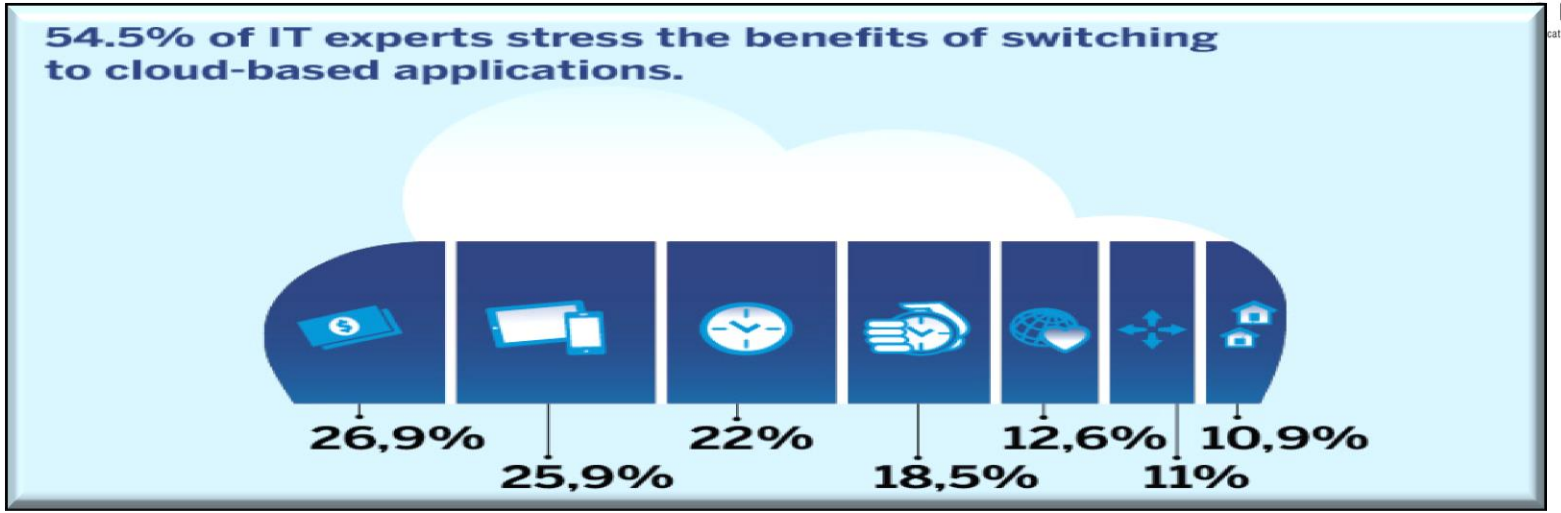
In THREE YEARS, *what % of your overall IT service delivery* do you guess will be through some form of the *cloud delivery model* - including public and private clouds?

IDC Analyze the Future



45.5%

Why are they moving…

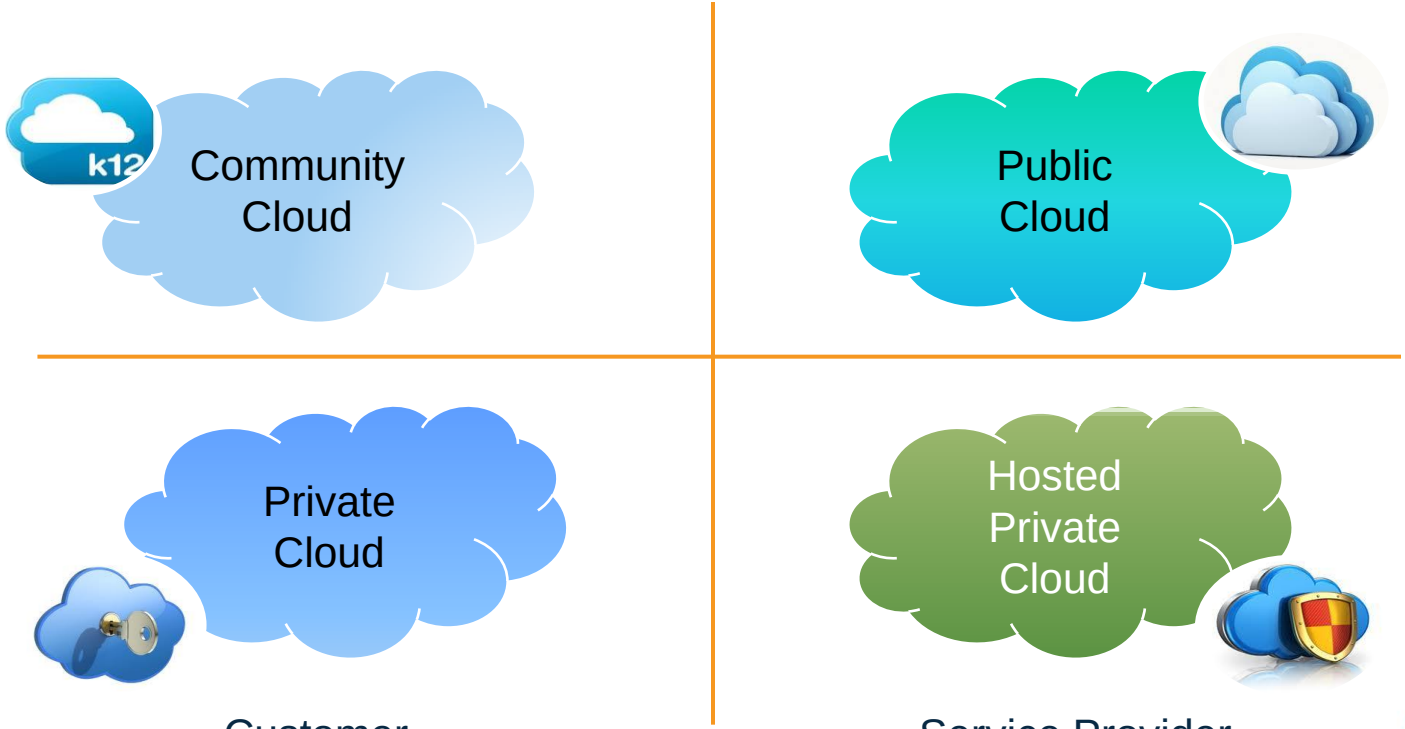


The benefits are: **cost savings** (26.9%), improved **mobility support** (25.9%), **time savings** (22%), fast implementation (18.5%), better for the environment (12.6%), elasticity to scale up or down as needed (11%), outsourced system support and maintenance (10.9%).

Key Differentiators

Description		
Availability	99.99%	99.9%
Security	VLAN, FW, IPS, DPI	VPN & Password
Storage	Tiered	Mass
Flexibility	High	Low (limited)
Performance	Typically good-very good	Typically fair-good

Deployment models



Enabling Cloud Service Advantage

Tailored Solutions for Building Clouds

Enable customers to build and operate public or private clouds

Rich Ecosystem with Integrated Solutions

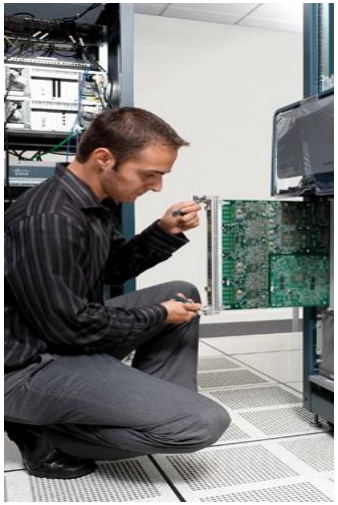
Enable customers to deploy tested, best of breed solutions

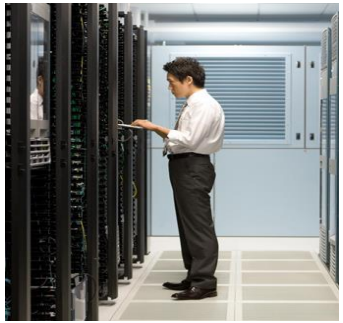
Accelerate the Use of Cloud Services

Enable customers to deploy cloud services to collaborate and secure their business

The Journey…Where are you?

Consolidation → Virtualization → Automation → Private Cloud → Public Cloud





Cloud Computing

Inter Cloud

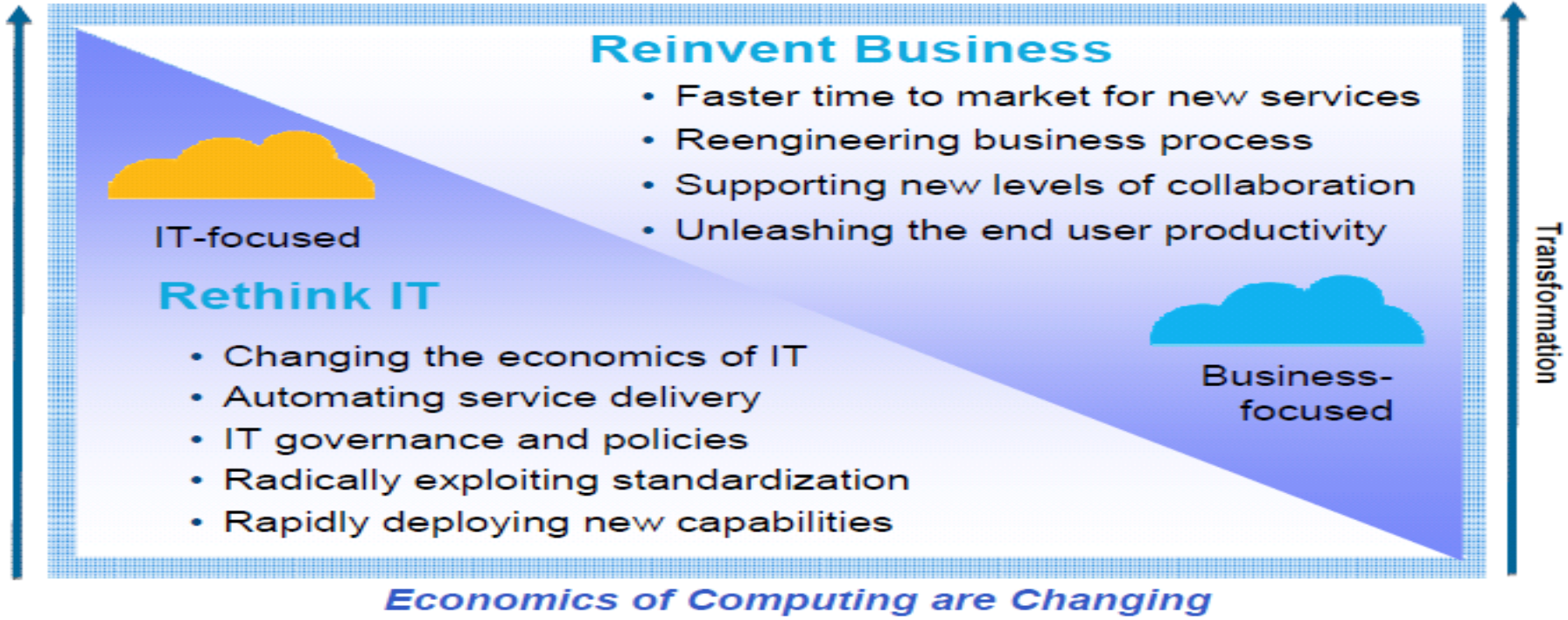
Enterprise Cloud

Unified Computing

Data Center Virtualization and Unified Fabric Architecture

Network and Data Center Consolidation

Conclusion


Reinvent Business
• Faster time to market for new services
• Reengineering business process
• Supporting new levels of collaboration
• Unleashing the end user productivity
IT-focused
Rethink IT
• Changing the economics of IT
• Automating service delivery
• IT governance and policies
• Radically exploiting standardization
• Rapidly deploying new capabilities
Business-focused
Transformation
Economics of Computing are Changing

Agenda

Cloud:

Technical view

"The cloud" is one of those trendy tech terms a lot of people use but can't clearly define.
What is the cloud?
When do you encounter it?
How can it benefit your business?

Cloud Computing
Your Data, Your Business
Floating effortlessly within the Internet / Intranet Boundaries
Accessible from anywhere, by anyone , anytime!

cloud com·put·ing
noun

the practice of using a network of remote servers hosted on the Internet or within your own Intranet to store, manage, provide and process data, rather than a local server or a personal computer.

Cloud Computing

Cloud computing is a pay-per-use model for enabling available, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, services) that can be rapidly provisioned and released with minimal management effort or service provider interaction

What is Cloud Computing?

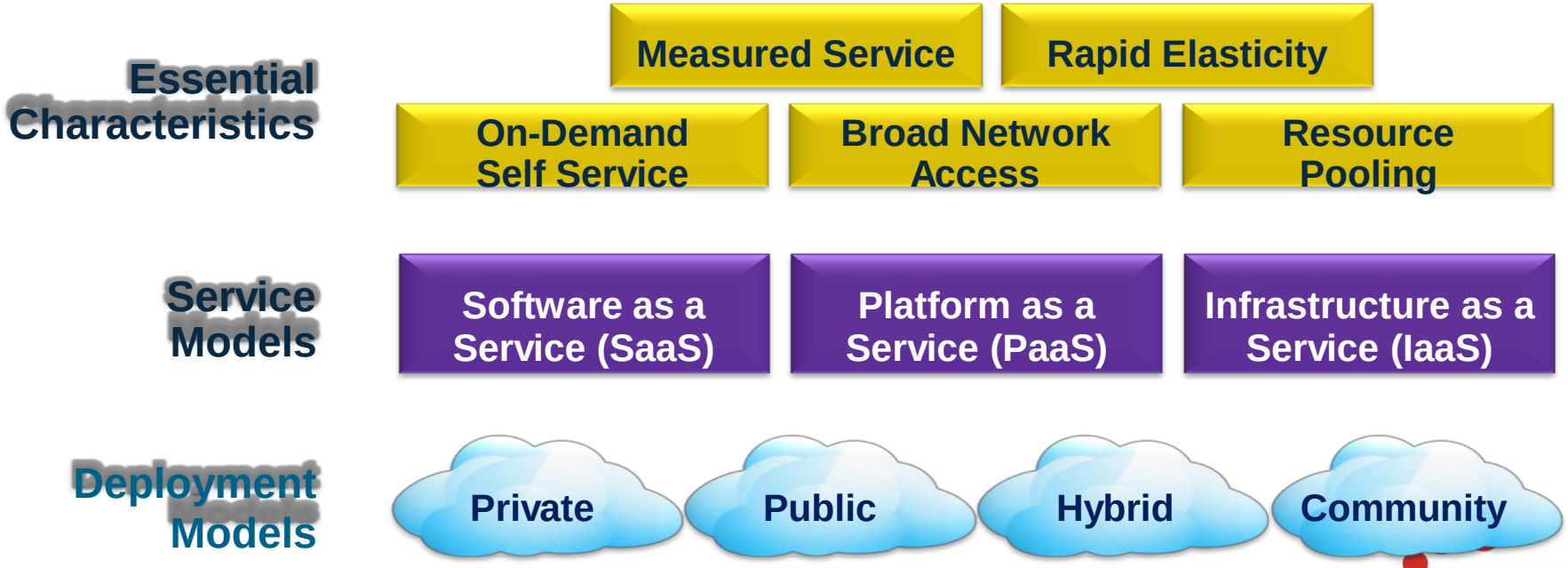
The official definition from the National Institute of Standards and Technology reads:

"Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services)that can be rapidly provisioned and released with minimal management effort or service provider interaction.“

Translation? Accessing your applications from the Internet anywhere, anytime and being able to use any or all of the data and applications that you want.

Cloud Definition from NIST

(National Institute of Standards and Technology)



http://www.csrc.nist.gov/groups/SNS/cloud-computing/index.html

Cloud Environments Definitions

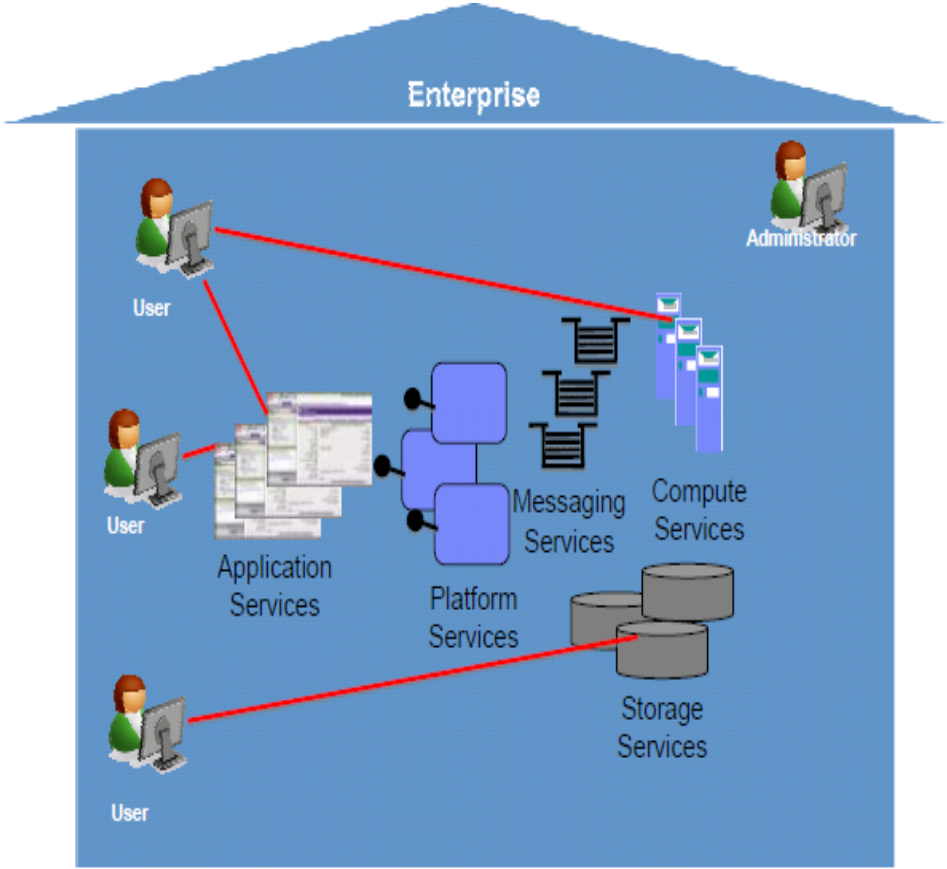
Cloud Environments:	
Private Cloud	The cloud infrastructure, platform or application is operated solely for an organization. It may be managed by the organization or a third party and may exist on or off premises.
Public Cloud	The cloud infrastructure, platform or application is made available to the general public or a large industry group and is owned by an organization selling cloud services.
Hybrid Cloud	A cloud infrastructure, platform or application that is a composition of two or more clouds (private or public) that remain unique entities but are bound together (integrated) by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load-balancing between clouds); hybrid clouds include public cloud integrated with private cloud, private cloud integrated with private cloud, and public cloud

Many companies are delivering services from the cloud.

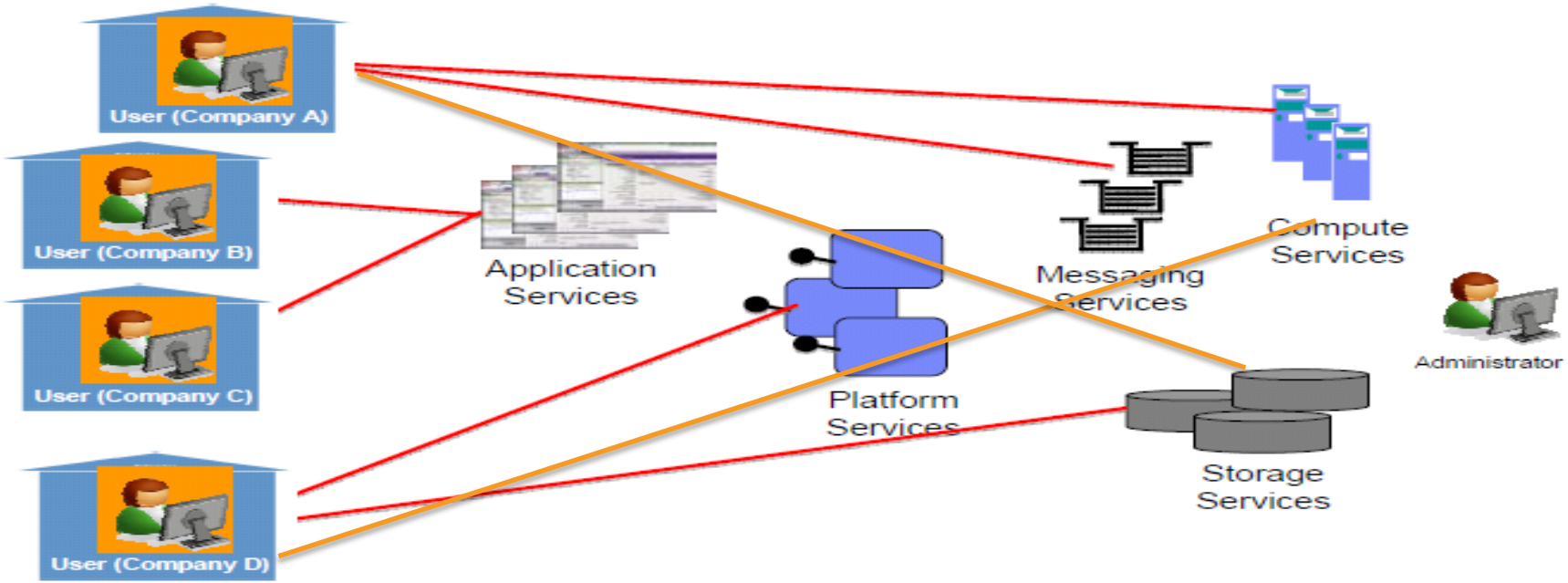
- **Google** — Has a private cloud that it uses for delivering many different services to its users, including email access, document applications, text translations, maps, web analytics, and much more.
- **Microsoft** — Has Microsoft® Sharepoint® online service that allows for content and business intelligence tools to be moved into the cloud, and Microsoft currently makes its office applications available in a cloud.
- **Salesforce.com** — Runs its application set for its customers in a cloud, and its Force.com and Vmforce.com products provide developers with platforms to build customized cloud services.

Private Cloud

- **Private, on-premise cloud**
- **All resource are local and dedicated.**
- **Server Virtualization**
- **Highly available storage**

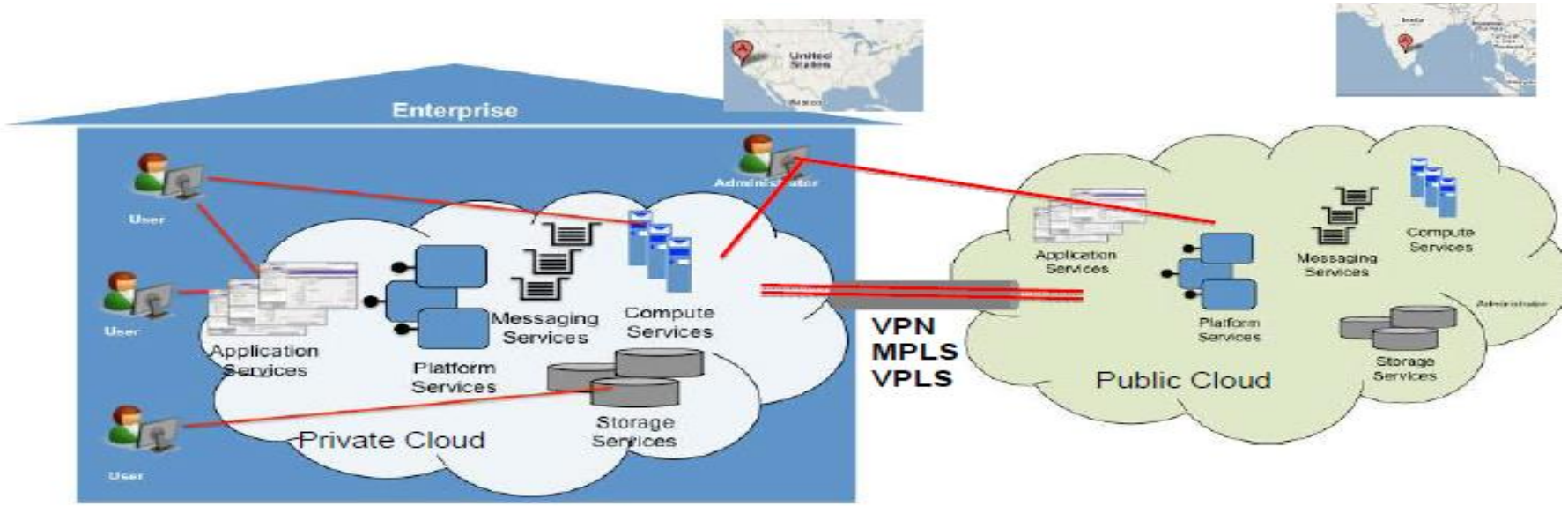


Public Cloud



Multiple tenants using the same public Cloud services

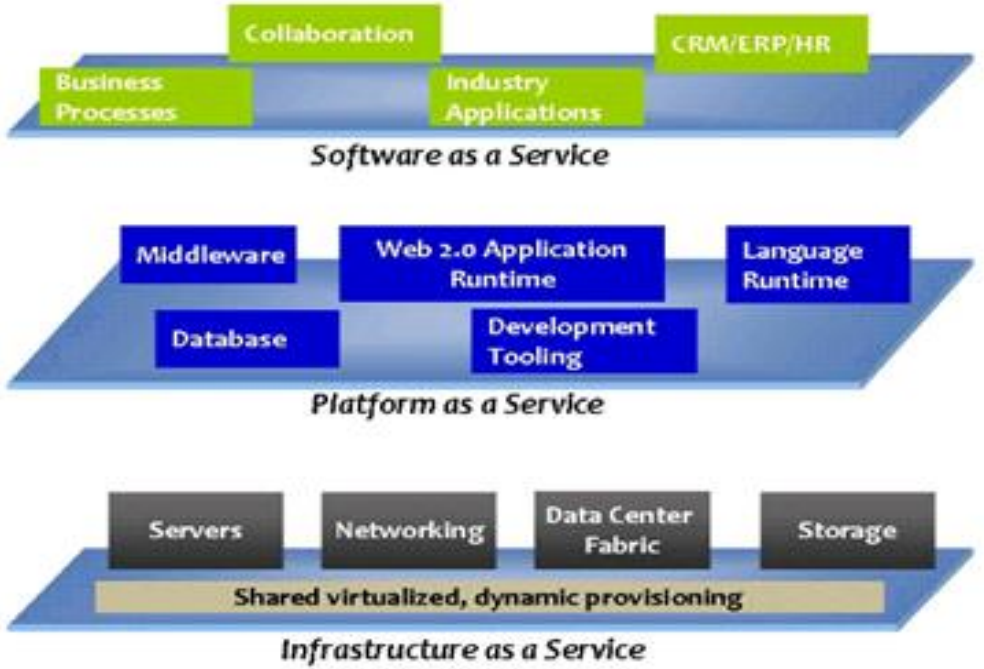
Hybrid Cloud



Both Private and Public clouds are managed by the Enterprise administrator with a unified systems management view of both infrastructures. Provides for increased resiliency and allows workloads to be isolated geographically.

Cloud Computing- Service Model

- SaaS
  (Software as a Service)
- PaaS
  (Platform as a Service)
- IaaS
  (Infrastructure as a Service)



SaaS
Software as a Service

Features

- No hardware or software to manage
- Allows user to run existing online applications
- Free or paid via subscription
- Service delivered through a browser
- Increasingly popular with SMEs

Advantages

- Pay per use
- Instant Scalability
- Security
- Reliability
- Examples
  1) Google doc
  2) Salesforce.com
  3) Microsoft office365

PaaS
Platform as a Service

Features

- Provides environment and tools for creating the new online applications.
- Rapid development at low cost
- Private or public deployment
- Platforms are built upon Infrastructure, which is expensive

Advantages

- Pay per use
- Instant Scalability
- Security
- Reliability
- APIs
- Examples

1) Google App Engine
2) Windows Azure
3) AWS:S3

IaaS
Infrastructure as a Service

Feature

- Allows existing applications to run on a cloud supplier's hardware.
- Server is the fundamental unit for IaaS
- Access to infrastructure stack like Full OS, Firewalls, Routers and Switches etc.
- IaaS comes under four offerings: private cloud, dedicated hosting, Hybrid hosting and cloud hosting.

Advantages

- Pay per use
- Instant Scalability
- Security
- Reliability
- Examples:

1) Amazon web services
2) Cloud enablement services

Agenda

Cloud:

What to Know ?

Cloud Computing-Deployment Model

- Businesses are choosing a variety of cloud models to meet their unique needs and priorities.
- **Private cloud**: IT capabilities are provided “as a service” over an intranet, within the enterprise and behind the firewall.
- **Public Cloud**: IT activities and functions are provided “as a service” over the Internet.
- **Hybrid Cloud**: Internal, on-premise and external service delivery methods are integrated

What are the benefits to working in the cloud?

The business decision to "move to the cloud" is often financially motivated.

Companies used to have to buy their own hardware equipment, the value of which depreciated over time.

But now with the cloud, companies only have to pay for what they use.

This model makes it easy to quickly scale use up or down.

Where to Begin Your Journey

When the topic of cloud comes up, the conversation often focuses on the newest technologies and the latest service provider offerings.

We feel the conversation needs to begin with an understanding of the expected business outcomes.

Is the goal to lower total cost of ownership (TCO) or greater agility and innovation, or some blend of the two?

The journey to cloud has many paths; starting the journey without a clear understanding of the destination can lead to disappointing results.

Where to Begin Your Journey

Enterprises should start the journey to cloud by answering some basic questions:

- What is the expected impact of cloud on my business?
- Which applications can and should I move to the cloud?
- What cloud deployment model is best suited for each of my applications?
- How do I transition my existing applications to the cloud?
- How do I maintain security and policy compliance in the cloud?
- How do I transition my organization to best take advantage of cloud?

The answers to these questions will fundamentally shape your cloud strategy.

Moving to a Cloud Operating Model

1. **Understand where you are**
   - Assess legacy application portfolio for cloud readiness
   - Assess infrastructure and application development capabilities
2. **Determine where you want to be**
   - Lay out a vision for desired end state for applications, infrastructure, and organization
3. **Understand the benefits and risks**
   - What applications will generate benefits from the move?
   - Identify the target metrics for success. Focus on business benefits.
   - Meet with partners and application vendors to see if the support plan changes.
4. **Develop your roadmap**
   - Target applications with rapid benefit for initial efforts
   - Ensure all appropriate new development and deployments are targeted for the new environment
5. **Begin execution**
6. **Track progress to objectives, course correct as appropriate**

Thank you !