



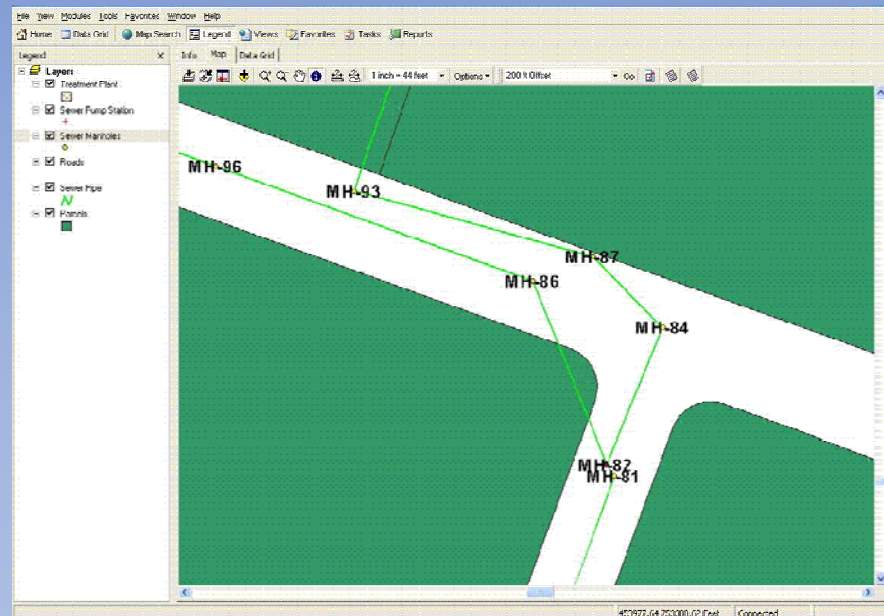
**SpatialDataLogic**  
**The Everyday GIS**

**GMIS NJ Conference**  
**GIS and Cloud Computing**  
**April 21, 2010**

**Jack Flood**  
**Spatial Data Logic**

# What is GIS

- GIS is an acronym for “Geographic Information Systems”
- It is the electronic representation of your maps with your data
  - For utilities this is Manholes, Valves, catch basins, etc
  - For municipalities it is parcels, zones and building
  - For the general public it is Google maps and Bing maps



# Traditional GIS

1. Maps are digitized,  
Aerials are flown

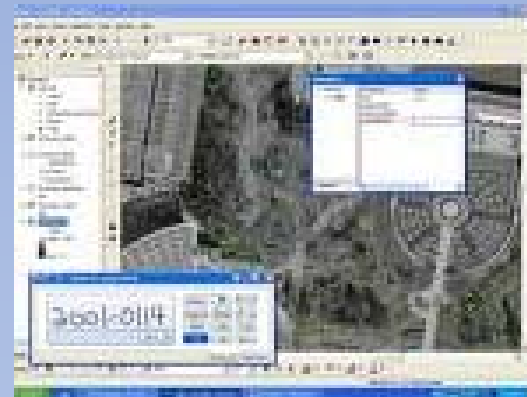


2. Data is added

Table 4  
Selected Interest Rates

	2002				Week Ending	
	Apr 15	Apr 22	Apr 29	Apr 15	Apr 15 (2001)	Mar
Federal Reserve Rate	2.00	2.00	2.00	2.00	2.75	2.75
Residential 30-year fixed rate	2.75	2.75	2.75	2.75	3.25	3.25
1 month	1.75	1.75	1.75	1.75	2.00	2.00
3 month	1.75	1.75	1.75	1.75	2.00	2.00
6 month	1.75	1.75	1.75	1.75	2.00	2.00
1 year	1.75	1.75	1.75	1.75	2.00	2.00
2 year	1.75	1.75	1.75	1.75	2.00	2.00
3 year	1.75	1.75	1.75	1.75	2.00	2.00

3. Technicians use GIS  
Software to Print and  
View

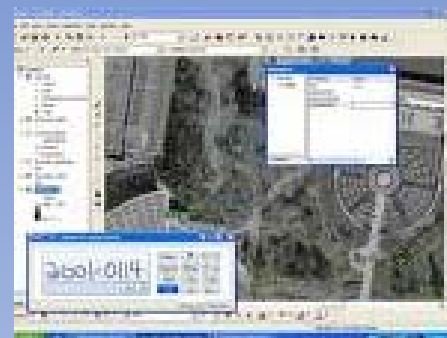


# Traditional Server GIS

1. Town / County  
buys Servers



2. GIS Maps and  
Data are added



3. Site available to public



# What changed in GIS



# The Cloud

**Definition :** is Internet- ("cloud-") based development and use of computer technology (wikipedia)

**What I call it...**

**Cloud Computing is the service of providing hardware and software as a pay as you go marketplace.**



# Clearing up the Cloud

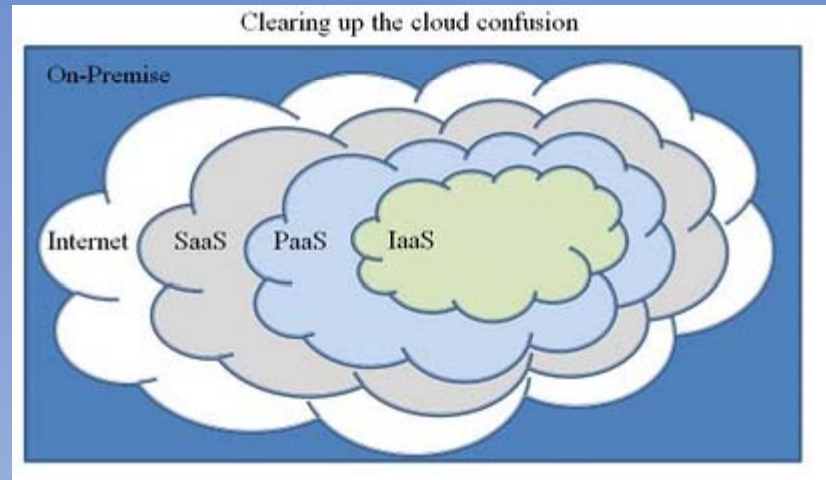
## Different type of clouds

IaaS : Infrastructure as a Service

Paas: Platform as a Service

SaaS: Software as a Service

And the internet too...

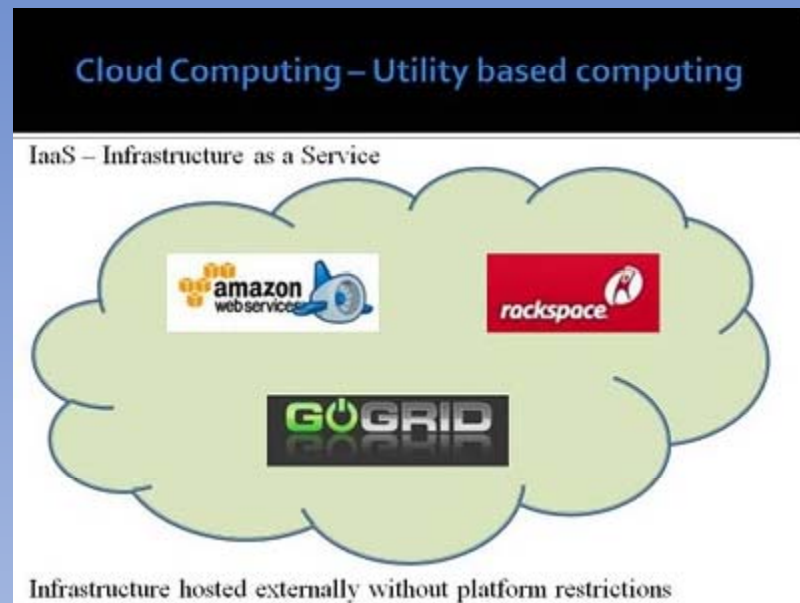


Reference : [Cloud Computing: Demystifying Cloud Terminology](#)

# Clearing up the Cloud – Infrastructure as a Service

**Infrastructure as a Service (IaaS)** gives you the ability to create virtual servers and develop in whatever you choose.

The most popular IaaS vendor is Amazon who is in my opinion the leader in innovation and maturity in the cloud computing space.



Reference : [Cloud Computing: Demystifying Cloud Terminology](#)

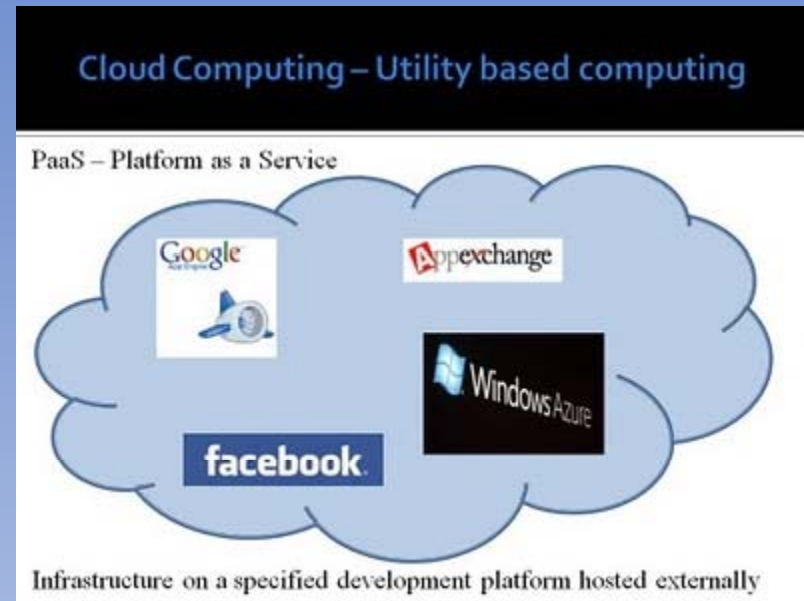
# Clearing up the Cloud Platform as a Service

PaaS providers like Google's App Engine and Force.com allow you to build your own applications on top of virtual server instances but restrict you to using their development languages.

For Google it is Python

For Microsoft's Azure it is .Net

For Force.com it is Apexchange.



Reference : [Cloud Computing: Demystifying Cloud Terminology](#)

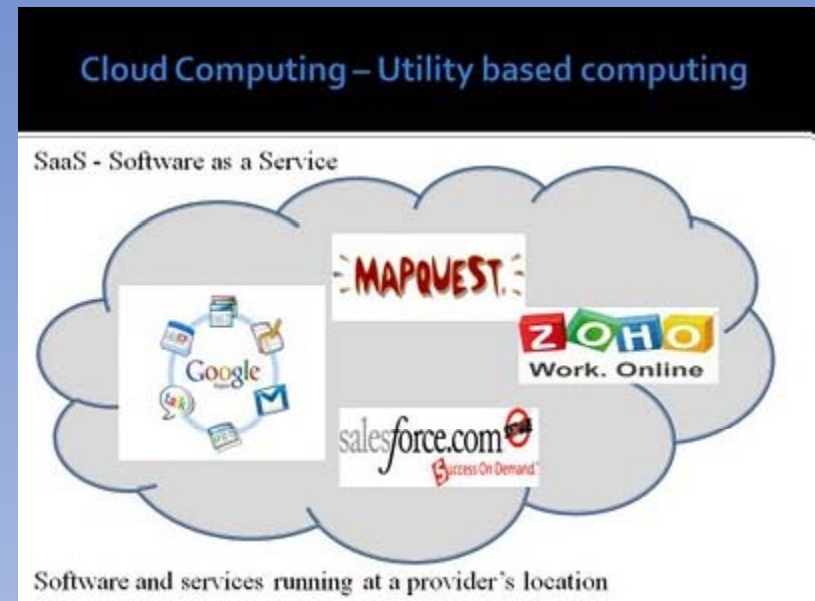
# Clearing up the Cloud Software as a Service

Software as a Service which was pioneered by companies like Google and SalesForce.com.

With SaaS, instead of buying shrink wrapped software that you must install on your infrastructure, patch, administer, and do all of those other non-value added tasks, you simply "lease" the rights to use the services that are provided.

In the case of Google and services like GMail, you get it for free..

Reference : [Cloud Computing: Demystifying Cloud Terminology](#)



# Why Cloud and GIS

1. Highly available computing power
2. Scalable infrastructure for multiple processes and multiple users.
3. Simple / Affordable rates
4. IT issues of installing and maintaining hardware is eliminated

# GIS in the Cloud Examples



- ESRI – Announced availability of Amazon EC instances by the hour with the release of ArcGIS 10 as well as the new ArcGIS.com later this year



- Arc2Earth Cloud Service - In beta, built on the Google App Engine for scalable solutions



- Sql Azure, in future release, will support Spatial Data sources directly from SQL.

# Is the Cloud for me?

**Good Question.**

**The answer is yes if...**

- 1. You have a large sets of data that you need to serve to multiple users**
- 2. You have a limited budget for IT and hardware**
- 3. Your process can be converted to a cloud based application.**



**SpatialDataLogic**  
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**Thank you for your time**

