

Cloud Computing: Thunderstorm or Silver Lining



Student Facilitators: Don Algama, Norbert Foy

Panelists: Joe Piplica, Andy Swenson,
Ken Knapp

Moderator: Harold Webb

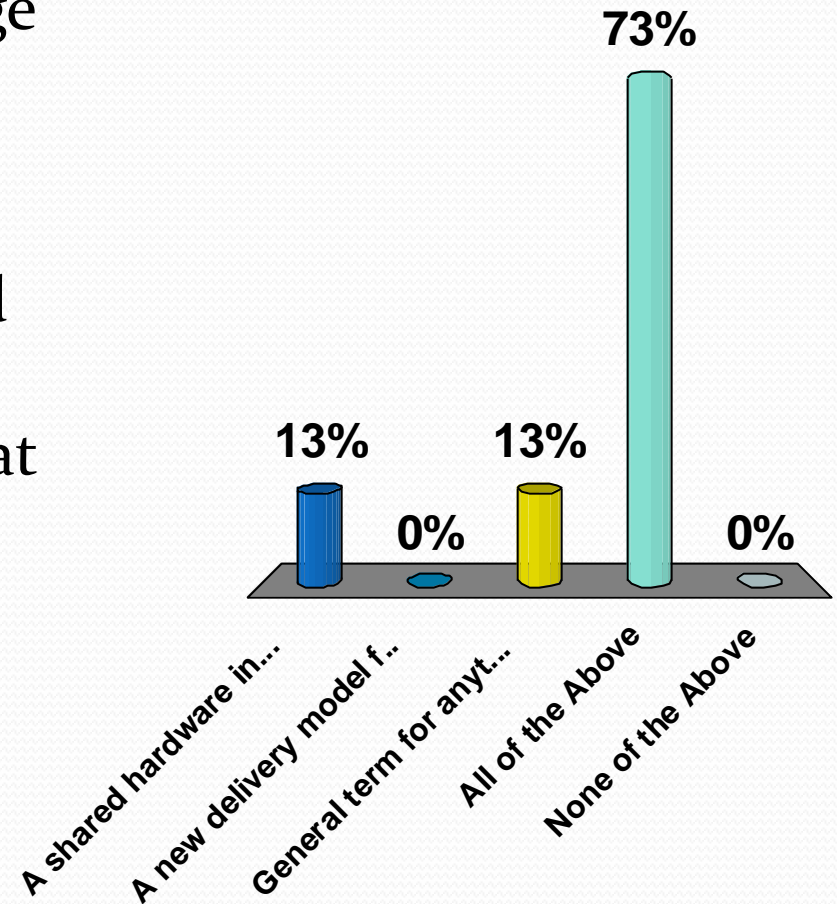
TBTLA Meeting -- February 11, 2010

Agenda

- 5 Questions to TBTLA Attendees
- Panelists Comments
- Questions & Answers
- Concluding Question

What is Cloud Computing?

1. A shared hardware infrastructure containing large pools of systems linked together
2. A new delivery model for outsourcing IT services based on the Internet
3. General term for anything that involves delivering hosted services over the Internet
4. All of the Above
5. None of the Above



Cloud Computing Definition



Public

Private

Hybrid

Community

Cloud Computing Definition

**Software as a
Service (SaaS)**

**Platform as a
Service (PaaS)**

**Infrastructure as
a Service (IaaS)**

Public

Private

Hybrid

Community

Cloud Computing Definition

**Broad
Network Access**

**Rapid
Elasticity**

**Measured
Service**

**On-Demand
Self-Service**

Resource Pooling

**Software as a
Service (SaaS)**

**Platform as a
Service (PaaS)**

**Infrastructure as
a Service (IaaS)**

Public

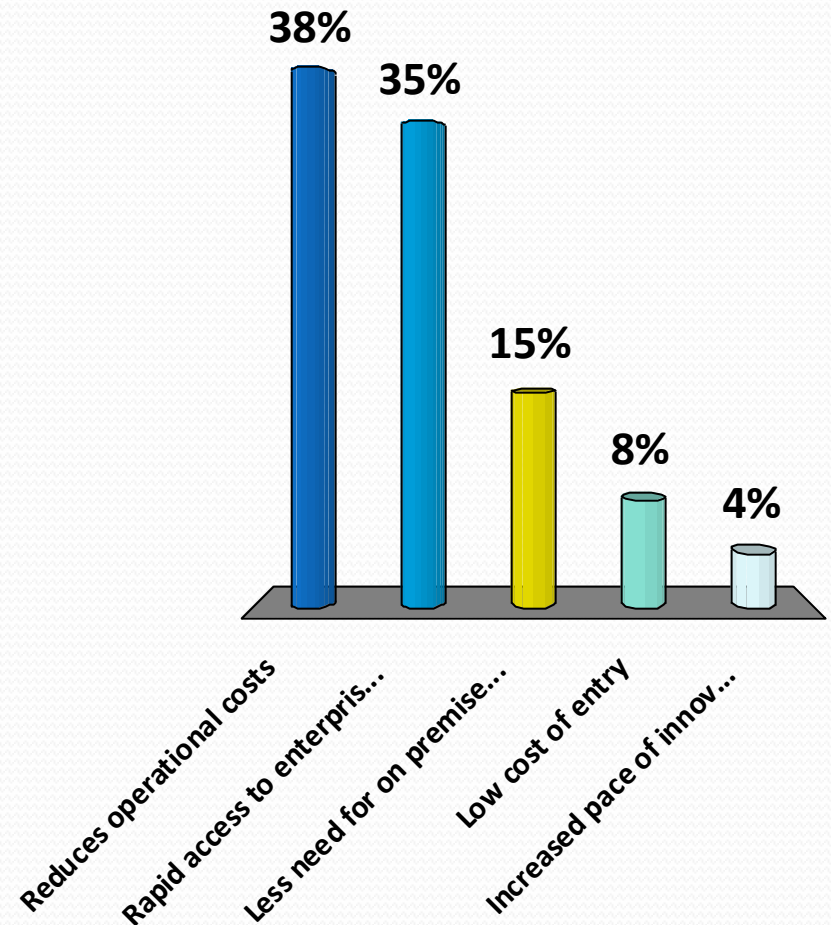
Private

Hybrid

Community

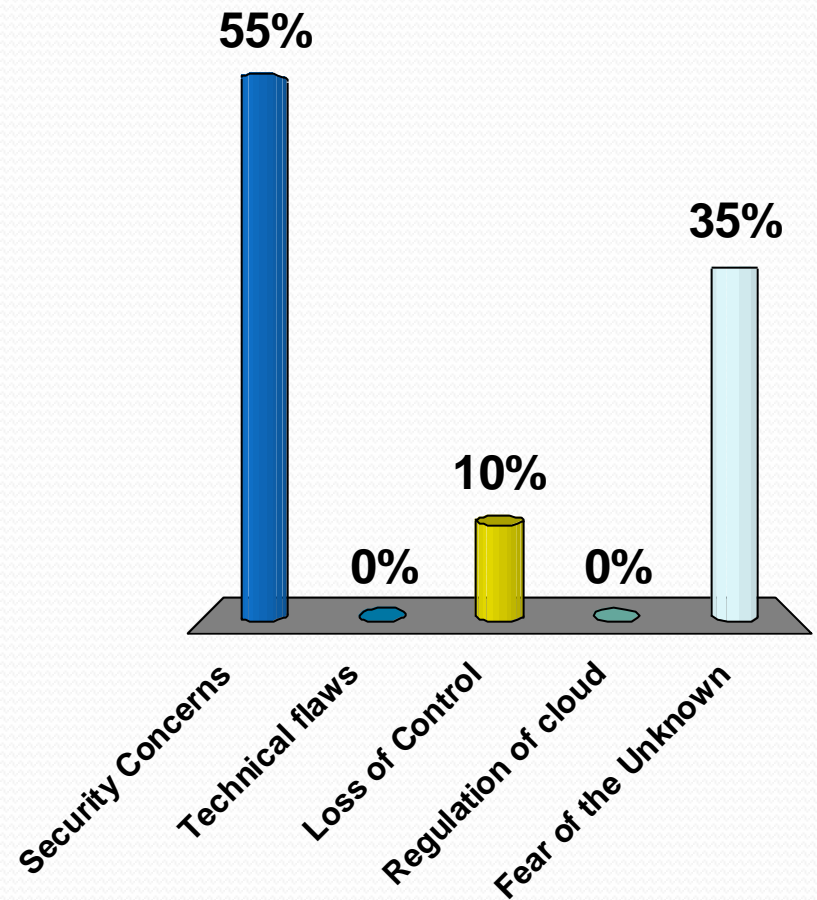
What is Cloud's Greatest Benefit for a Business?

- 1) Reduces operational costs
- 2) Rapid access to enterprise class services
- 3) Less need for on premise infrastructure
- 4) Low cost of entry
- 5) Increased pace of innovation



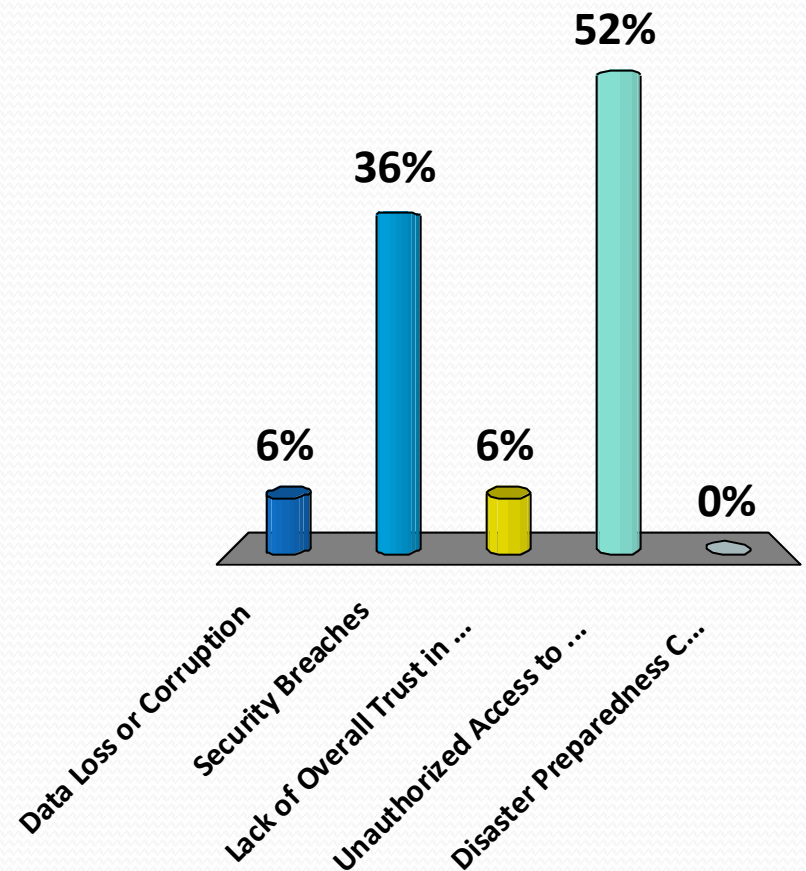
What is Cloud's largest impediment to Adoption?

1. Security Concerns
2. Technical flaws
3. Loss of Control
4. Regulation of cloud
5. Fear of the Unknown



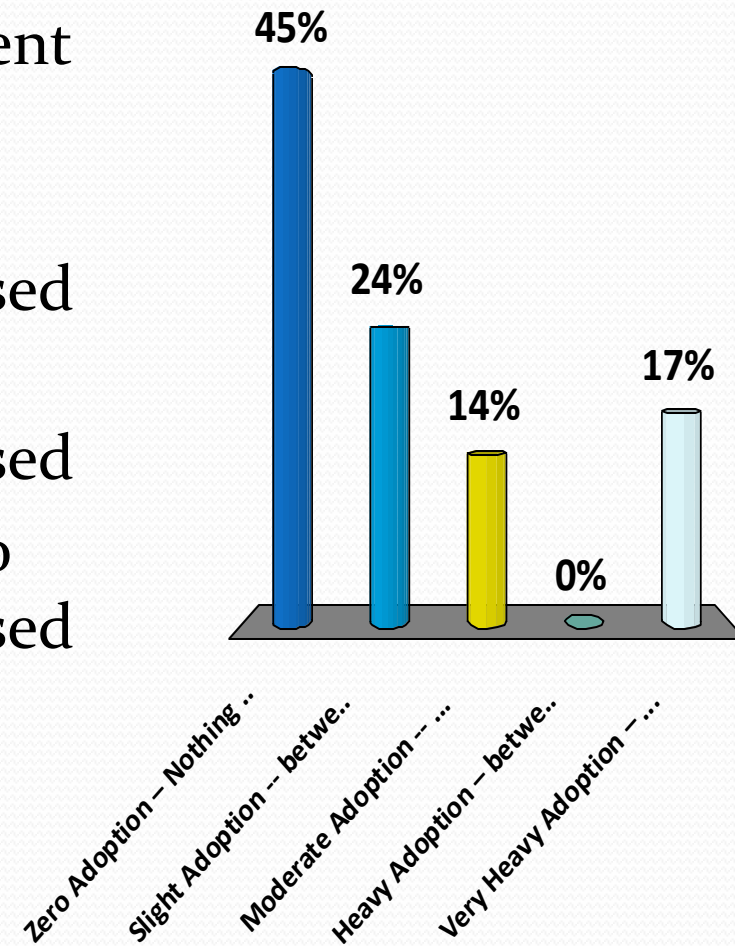
What is Cloud's biggest security risk?

- 1) Data Loss or Corruption
- 2) Security Breaches
- 3) Lack of Overall Trust in Cloud Provider
- 4) Unauthorized Access to Data
- 5) Disaster Preparedness Concerns

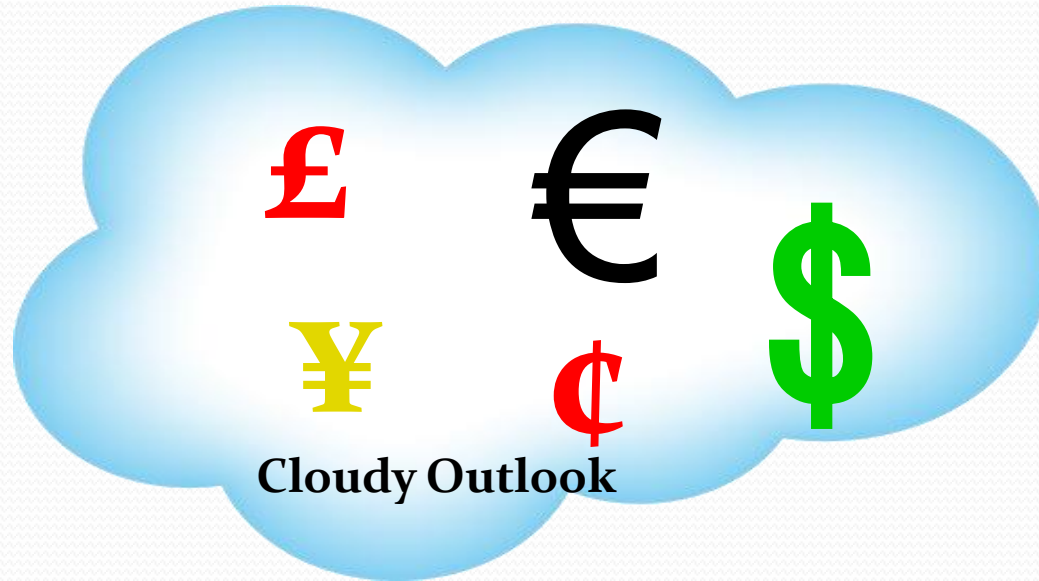


To What Degree has your Organization Adopted Cloud Computing?

- 1) Zero Adoption – Nothing is Cloud-based
- 2) Slight Adoption -- between 1 – 10 percent of our computing is Cloud-based
- 3) Moderate Adoption -- between 11 – 25 percent of our computing is Cloud-based
- 4) Heavy Adoption – between 26 – 50 percent of our computing is Cloud-based
- 5) Very Heavy Adoption – between 51-100 percent of our computing is Cloud-based



Economics of Cloud Computing



- **ABOUT 3.2% OF U.S. SMALL BUSINESSES, OR ABOUT 230,000 BUSINESSES, USE CLOUD SERVICES.**
- **ANOTHER 3.6%, OR 260,000, PLAN TO ADD CLOUD SERVICES IN THE NEXT 12 MONTHS.**
- **SMALL-BUSINESS SPENDING ON CLOUD SERVICES WILL INCREASE BY 36.2% IN 2010 OVER A YEAR AGO, TO \$2.4 BILLION FROM \$1.7 BILLION.**

SOURCE: IDC

Big Players

salesforce.com.
Success. Not Software.®

SOFTWARE
force.com.
Dream. Build. Succeed.™

amazon
web services™

Google™

facebook

flickr™



Windows Azure™

IBM

NETSUITE

rackspace.
HOSTING

ZOHO®
Work. Online

Yesterday's Applications Aren't Keeping Up

Too Slow to Deploy & Change



The market moves so quickly that an 18 month IT project is 16 months too late for the opportunity.



Capital & Resource Intensive

Anticipate the percentage paid for maintenance for on-premises CRM applications to continue rising to an average of above 30% by 2020.



Public and Private Organizations Need A New Approach

Low upfront costs



Faster return on
investment

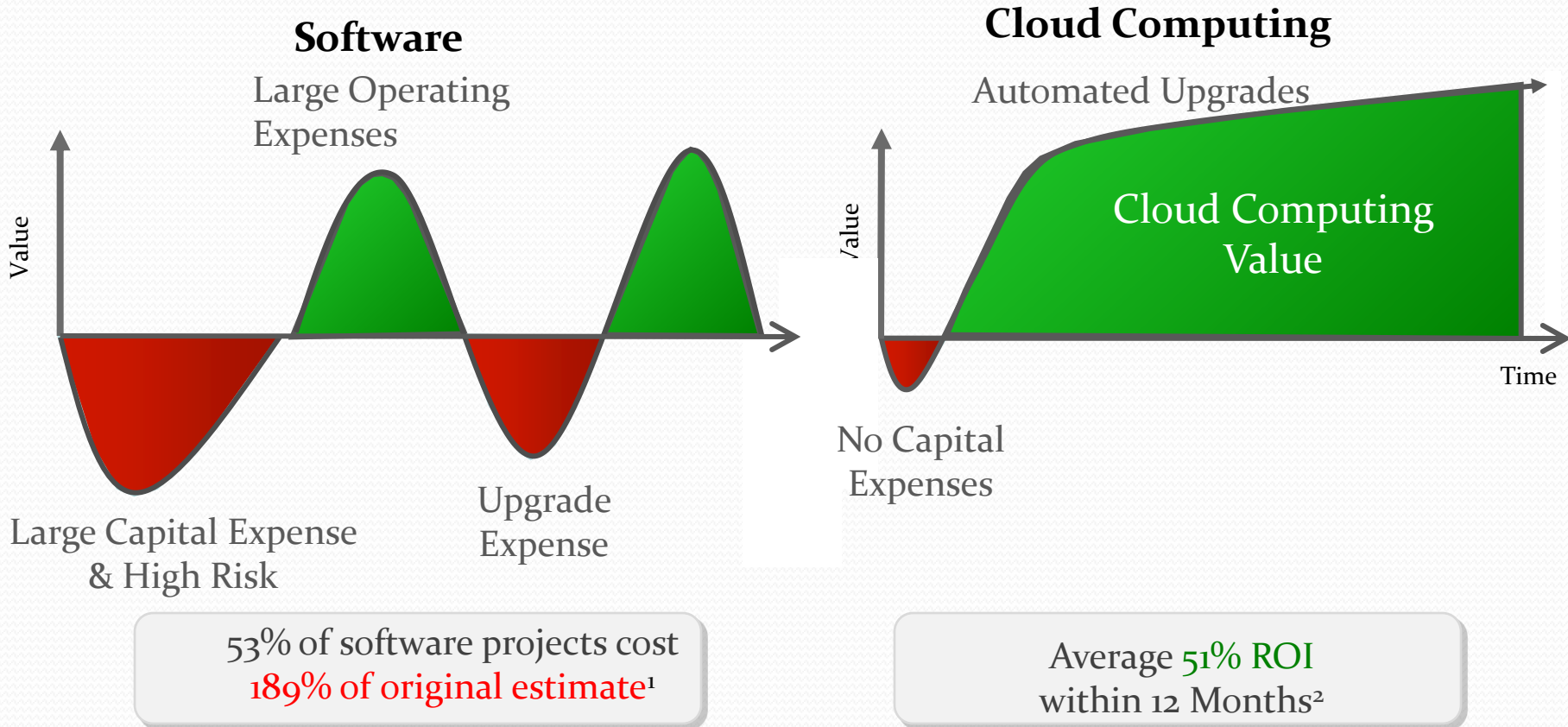


Reduced risk

Proven Results



The Cloud Delivers Fast Time to Value



¹Standish Group, Chaos Report 2006

²Third-Party CustomerSat Research on 3,500 Salesforce.com customers, December 2009

The Cloud Delivers Lower TCO

On Premise = Hidden Costs



Cloud Computing:
46% Lower TCO¹

No Upfront License Fees
No Hardware Infrastructure
Lower Implementation Costs
Free Upgrades
No Ongoing Maintenance Fees
Predictable

“A software-as-a-service model will **substantially lower TCO**, especially in the first year.”



Risk Considerations

- Confidentiality
 - Where is your data stored?
 - Who has access?
 - Is it encrypted?
- Connectivity
 - How long can you go without your systems?
- Control
 - Can you customize?
 - What happens in a dispute?
- Capabilities
 - Does vendor have security response capabilities?



Recommended Practices

- Research vendor's environment
 - security measures and infrastructure
- Ask about tools they can provide for you
- Encrypt data **at rest and in transit**
 - Key management is important
- Separate duties between your staff and vendor staff
- Look for SAS 70 Type 2 and ISO 27001 accreditation.
- Partner with established and trusted firms

Cloud versus On-premise Computing

- *Similar Security Issues Exist*
 - Network Security ... Human Security ... Legal & Regulatory ... Apps Security ... etc.
- Cloud Represents a *Cultural Shift*
 - Loss of Control -- especially Public Clouds
 - Can the Cloud provider be trusted?
- Many Issues *Intensified*
 - Disaster Planning
 - Cyber-Physical Security

Data Centers: Cyber-Physical Security in the Cloud



*Cloud Computing:
Thunderstorm or Silver Lining*



Question & Answer Session

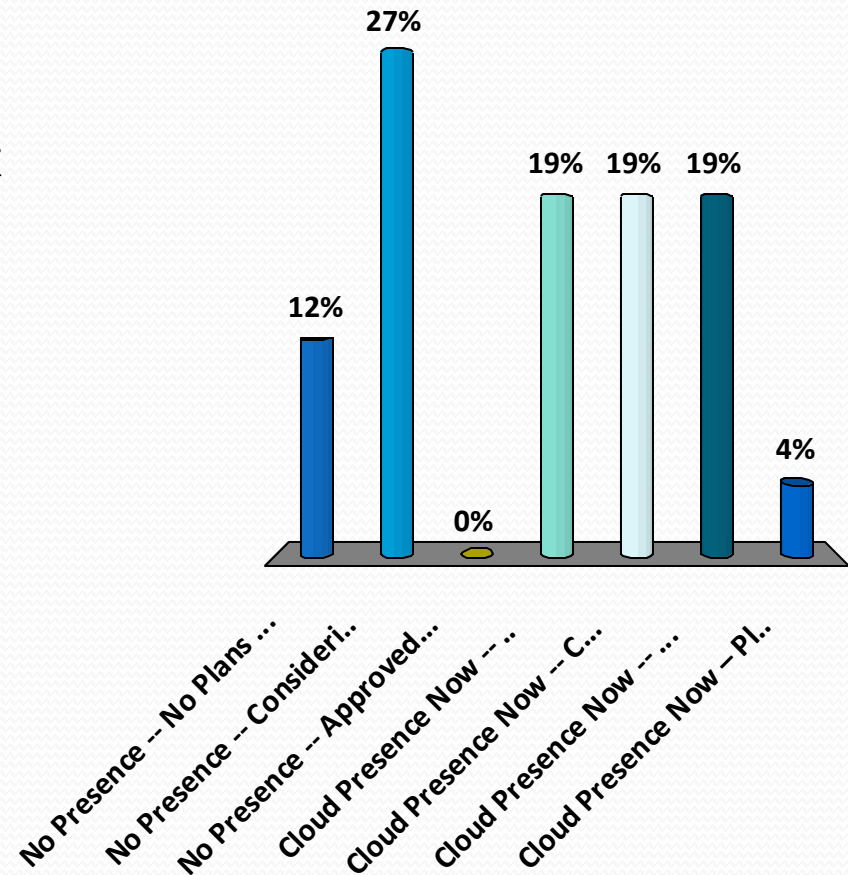
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What are your Cloud plans over the next 12-18 months?

1. No Presence -- No Plans Either
2. No Presence -- Considering the Possibilities
3. No Presence -- Approved Project
4. Cloud Presence Now -- No Additional Plans
5. Cloud Presence Now -- Considering Additional Adoption
6. Cloud Presence Now -- Approved Additional Project
7. Cloud Presence Now -- Plan to *Reduce* in Future



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