

The Cloud Computing Revolution: Beyond the Hype



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Overview

- **Cloud computing business models vary significantly, as do the potential business and legal risks, particularly for financial services companies.**
- **Supplier “first generation” form agreements and existing master services agreements do not properly address cloud computing services risks and compliance issues.**
- **This session will explore what makes cloud computing different, contracting models and effect on existing outsourcing agreements, and emerging delivery and pricing methodologies.**



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Virgin Blue delays as software goes down

AAP | September 26, 2010 12:32PM

A⁺ A⁻   

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VIRGIN Blue passengers are facing lengthy delays across Australia because of a computer glitch.

A Virgin Blue spokeswoman said the airline had been experiencing IT issues with its check-in system, leading to delays and some flight cancellations.

The problem is affecting domestic flights across the country as staff revert to manual check-in processes, she said.

The spokeswoman said Virgin Blue was working very hard to fix the problem.

MarketWatch

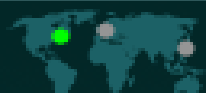
October 14, 2010

2:15 PM EDT

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-0.41%

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2:06p **BREAKING**

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July 23, 2010, 9:01 a.m. EDT · Recommend (3) · Post:

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By John Letzing, MarketWatch

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SAN FRANCISCO (MarketWatch) -- Roughly nine months after Google Inc. edged out rival Microsoft Corp. to win a high-profile contract to supply email and collaboration software to the City of Los Angeles, the company has missed a June deadline for full implementation due to lingering security concerns.



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Coghead Failure Highlights Risks Of Cloud Computing

Cloud computing is growing, with Google now monetizing its App Engine. But no matter what the vendor, customers should have a good emergency-exit strategy.

By [Mary Hayes Weier](#)
InformationWeek

February 25, 2009 05:15 PM

Govind Davis, a Coghead customer, didn't see its sudden closing coming. Enticed by the cloud computing vendor's low-cost service, Davis built some of his customers' applications using Coghead's online database. Now his company, MCF Technology, has nine weeks to extract data from Coghead and build new applications for it, some of which will run on Intuit's QuickBase, also in the cloud.

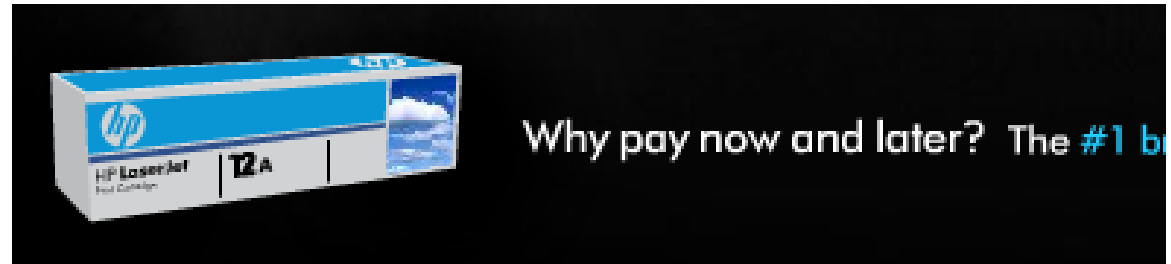


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Gmail Failure Heightens Cloud Computing Jitters



By Mike Pearson
E-Commerce Times
09/02/09 12:31 PM PT

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Just when enterprises began warming up to the idea of the cloud as a safe repository for data and IT operations, Google's massive Gmail system suffered a meltdown, cutting off millions from their normal channels of communication for more than an hour and a half. Google

is taking swift steps to prevent another Gmail fiasco, but rebuilding trust may take a while.

The Silver Lining

- Cloud computing covers a multitude of different business and technology models, having different risk profiles and contract implications
- Understanding how the “cloud” will be used in a particular outsourcing solution is key to successful contracting



1. What Makes Cloud Computing Different

2. Contracting Models and Risks

3. Emerging Delivery Methods and Pricing Methodologies



What Is Cloud Computing?

NIST Definition: *“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.”* (v15, October 7, 2009)

EU Definition: *“A ‘cloud’ is an elastic execution environment of resources involving multiple stakeholders and providing a metered service at multiple granularities for a specified level of quality (of service).”*



Cloud Computing Models

Software-as-a-Service (SaaS)

- Access standard software over the internet
- Not a customized solution, with the software used by many
- No “version control;” new versions implemented to all users
- Software configuration limits set by the supplier

Platform-as-a-Service (PaaS)

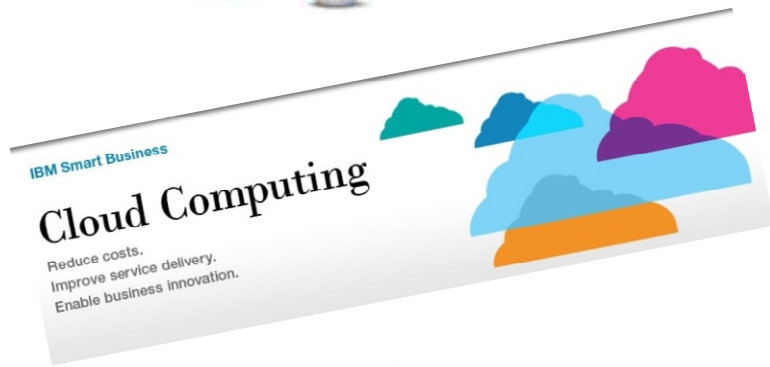
- Customer ability to access/build applications on supplier defined architecture
- Ability to deploy and access custom software solution over the internet
- Supplier established programming capability limits

Infrastructure-as-a-Service (IaaS)

- Ability to move applications and operating system software to a cloud platform
- Supplier established infrastructure configuration
- Supplier established availability and scalability limitations



Cloud Service Offerings



Technologies

Cloud computing
Managing a hybrid services environment



Cloud Computing – Do we have our heads in a cloud?

Is this just hype creating unnecessary concern?

- Is any of this really new?
 - Service bureau
 - Hosted applications
 - E-Commerce services
 - Outsourced IT infrastructure
 - ASP services
- What's different about the “cloud”?



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Cloud Computing Pre-Contract Issues

- Understand the technology to be implemented and access methods, as well as data movement and storage
 - Map the data-flows, data storage and technology infrastructure across geographies
 - Map the interaction and integration points with third party services/systems/software/data feeds
- Determine whether the cloud-based solution complies with regulatory requirements for financial services companies



A Storm Formation?

Understand the Interaction Between Clouds

- Cloud architecture and topography
 - Private, public, hybrid, dedicated
- General integration issues across clouds
- Consistent standards
 - Data security and backup, privacy, single sign-on



Cloud Computing Contracts

Critical Issues to Consider

- Service levels
- Intellectual property
- Data ownership and use
- Data security
- Privacy
- Compliance with laws and regulations



Cloud Computing Contracts

Service Levels

- Availability
- Scalability
- Response time
- Problem escalation/resolution

Reality: Most commodity cloud offerings have limited SLAs, if any. Each cloud services solution needs to be reviewed, including against existing SLAs, to determine appropriate SLAs, metrics and remedies.



Cloud Computing Contracts

Intellectual Property

- Consents to use technology infrastructure
- Licensing models
 - Seat/User/Enterprise vs. “Cloud”
 - Do existing agreements permit use of third party software/data in the cloud architecture?
- Scope of IP indemnification



Cloud Computing Contracts

Data Ownership and Use

- Ownership of:
 - Data input by the customer or its customers
 - Data processed and stored in the cloud
- Supplier right to use “aggregated” data
- Provision/Integration with third party data
- Portability of data/locked into a cloud



Cloud Computing Contracts

Data Security Issues

- Data security requirements
- Back-up and redundancy
- Location of storage
- Retention and destruction requirements
- Audits
- Subpoena response



Cloud Computing Contracts

Privacy Issues

- What data is involved?
 - PII and PHI
 - GLB, HIPAA, EU directive compliance?
- Where is the data transmitted and stored?
- Restrictions on use by the service provider and third parties?
- Solution consistent with privacy policies?



Cloud Computing Contracts

Law and Regulatory Compliance

- Compliance with laws
 - Which laws/regulations apply?
 - International concerns
- Changes in laws/regulations

Reality: Due diligence is key for financial services companies to determine whether a particular cloud-based solution will be in compliance with applicable laws/regulations.



1. What Makes Cloud Computing Different

2. Contracting Models and Risks

**3. Emerging Delivery Methods
and Pricing Methodologies**



Emerging Delivery Methods and Pricing Methodologies

Panel Discussion

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The Cloud Computing Revolution: Beyond the Hype

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