

Security In The Cloud

A Conversation with
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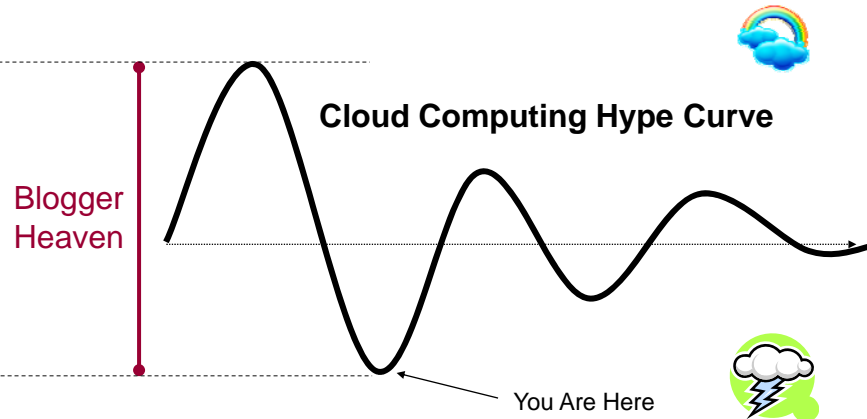
Security In The Cloud

Robbie Forkish
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August, 2009

Agenda

- Hand wringing, forecasts of doom
- Out of the fog, into the cloud
- What you need to know about cloud security
- Security questions for your cloud vendor
- Can the cloud make you more secure?
- Resources
- Q&A

Hand Wringing, Forecasts Of Doom



Dark Reading, June 2009: Could The Cloud Lead To An Even Bigger 9/11?
"...a coordinated attack...could stop a country cold, with recovery taking years and massive infrastructure failures causing loss of life and resources never seen outside of an outright world war."

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Out Of The Fog, Into The Cloud

- What are the drivers for cloud computing, including Infrastructure-, Platform-, and Software-as-a-Service (IaaS, PaaS, and SaaS) service delivery models
 - Little or no upfront investment
 - Just in time infrastructure
 - Pay only for resources you use
 - SaaS: No software to deploy or manage
- Moving apps to the cloud, or adopting cloud-based SaaS solutions, will be business-case driven
- Best practices: classify your applications and data, evaluate/prioritize for cloud migration suitability, rewrite, or replacement (e.g. SaaS)
- Adopt security strategy consistent with the sensitivity/criticality of applications and data

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What You Need To Know About Cloud Security

- Application vulnerabilities in your data center will also be application vulnerabilities in the cloud
- Developer access to production systems is a potential vulnerability in your data center, and in the cloud
- Privileged users and developers represent potential vulnerabilities in your data center, and in the cloud
- No free lunch... the Cloud won't make vulnerable applications or processes any more secure—but could make them easier to exploit



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What You Need To Know About Cloud Security

- Consider apps being migrated to cloud: what are their security and compliance requirements?
- Not all clouds are created equal: what security capabilities are offered by your cloud vendor?
- Whatever your baseline vulnerabilities are, the cloud provider's privileged admins represent potential incremental exposure—make this an area of focus
- Get educated about cloud provider security, ensure alignment with your requirements with contractual SLAs



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Security Questions For Your Cloud Vendor

- Gartner's seven specific security issues*
 - Privileged user access
 - Regulatory compliance
 - Data location
 - Data segregation
 - Recovery
 - Investigative support
 - Long-term viability
- Gartner predicts that by 2010, "*confusion around the cloud will have been replaced with clean-slate competitors delivering and consuming services from search, to identity, to core infrastructure operations*"



* Assessing the Security Risks of Cloud Computing, June 2008

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Security Questions For Your Cloud Vendor

- Cloud Security Alliance's fifteen strategic security domains*
 - Divided into three sections
 - Cloud Architecture
 - Governing in the Cloud
 - Operating in the Cloud
 - Besides issues covered by Gartner, also addresses:
 - Information Lifecycle Management
 - Portability and Interoperability
 - Encryption and Key Management
 - Identity and Access Management



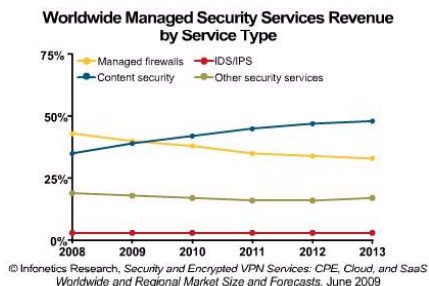
* Security Guidance for Critical Areas of Focus in Cloud Computing, April 2009

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Cloud-Based Services: Resistance Is Futile

- Infonetics Research projects the security SaaS market will grow at a rate of 46% annually for the next 5 years



- As more services are delivered from the cloud, scale economies and technical leverage will push cloud computing into the mainstream

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How The Cloud Makes You More Secure

- Some examples of cloud-based security and compliance services:
 - VeriSign offering Authentication as a Service (AaaS) from the cloud
 - Simplified, an on-demand identity company, provides identity management in the cloud
 - McAfee now offering cloud-based security and compliance services, including PCI Compliance Service, Vulnerability Management Service, and Web Security Service
 - Cloud Compliance offers a cloud-based identity and access assessment service for SOX, PCI DSS, GLBA and HIPAA



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Resources

- Above the Clouds: A Berkeley View of Cloud Computing
<http://www.eecs.berkeley.edu/Pubs/TechRpts/2009/EECS-2009-28.html>
- Cloud Taxonomy (OpenCrowd)
<http://www.opencrowd.com/views/cloud.php/2>
- Cloud Computing Bill of Rights
http://wiki.cloudcommunity.org/wiki/CloudComputing:Bill_of_Rights
- Cloud Security Alliance white paper
<http://www.cloudsecurityalliance.org/guidance/csaguide.pdf>
- Building Security In Maturity Model (BSIMM)
<http://bsi-mm.com/>
- Amazon Web Service (AWS) Security Center
<http://aws.amazon.com/security/>
- IBM Cloud Computing
<http://www.ibm.com/ibm/cloud/>
- Force.com (Salesforce.com)
<http://www.salesforce.com/platform/cloud-platform/>

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Q&A



- More discussion around the “Webtorials Water Cooler”
 - www.Webtorials.Com/Water-Cooler

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Thank You!

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