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Cloud Security Alliance

Security Guidance for Critical Areas of Focus in Cloud Computing

April 27, 2009

Agenda

- About the Cloud Security Alliance
- Guidance 1.0
- Call to Action

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About the Cloud Security Alliance

- Not-for-profit organization
- Inclusive membership, supporting broad spectrum of subject matter expertise
- Strong voice for the security practitioner
- We believe in Cloud Computing, we want to make it better
  - *"To promote the use of best practices for providing security assurance within Cloud Computing, and provide education on the uses of Cloud Computing to help secure all other forms of computing."*

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Getting Involved

- Individual Membership (free)
  - Subject matter experts for research
  - Interested in learning about the topic
  - Administrative & organizational help
- Corporate Sponsorship
  - Help fund outreach, events, research
- Affiliated Organizations (free)
  - Joint projects in the community interest
- Contact information on website

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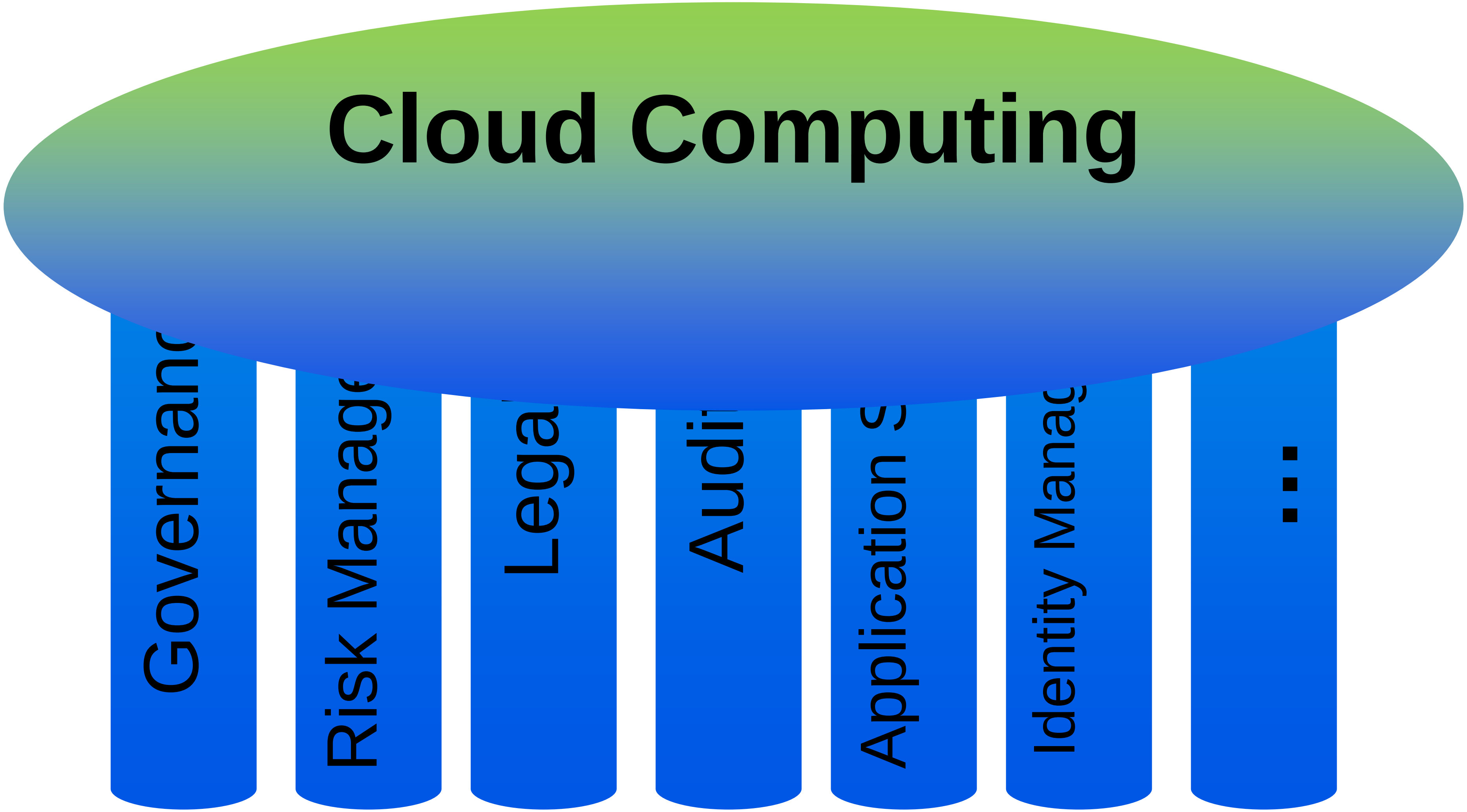
Focus



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Security Guidance for Critical Areas of Focus in Cloud Computing

Download at:

www.cloudsecurityalliance.org/guidance

Overview of Guidance

1. Architecture & Framework

Governing in the Cloud

2. Governance & Risk Mgt
3. Legal
4. Electronic Discovery
5. Compliance & Audit
6. Information Lifecycle Mgt
7. Portability & Interoperability

Operating in the Cloud

8. Traditional, BCM, DR
9. Data Center Operations
10. Incident Response
11. Application Security
12. Encryption & Key Mgt
13. Identity & Access Mgt
14. Storage
15. Virtualization

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Assumptions & Objectives

- Selected domains based on both strategic and tactical pain points
- Broad “security program” view of the problem
- Primary audience is the cloud customer’s security practitioner
- Focused on differences caused by cloud models

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Domain: Architecture

- Not possible to adequately summarize here
- But critical to understanding risks & mitigation
- 5 principal characteristics (abstraction, sharing, SOA, elasticity, consumption/allocation)
- 3 delivery models
  - Infrastructure as a Service (IaaS)
  - Platform as a Service (PaaS)
  - Software as a Service (SaaS)
- 4 deployment models: Public, Private, Managed, Hybrid

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Domains

- Governance & ERM
  - Invest cost savings/ 3rd Party transparency/ Financial viability
- Legal
  - Provider – Customer reg conflicts/ secondary uses of data/ Cross border data/ term relationship
- Electronic Discovery
  - Authentic data preservation/ roles & responsibilities

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Domains

- Compliance & Audit
  - Audit on demand/ privacy impact assessment/ certification scoping
- Information Lifecycle Mgt
  - Breach cost recovery/ data destruction/ classify data
- Portability & Interoperability
  - Abstraction layers/ PaaS loose coupling/ open standards/ competitors

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Domains

- Traditional, BCM/DR
  - Provider insider threat & job compartmentalization/ onsite inspection/ infrastructure
- Data Center Operations
  - System & data compartmentalization/ patch mgt/ resource sharing framework/ Failover
- Incident Response
  - Limit scope of incident through encryption/ application layer monitoring/ app registry

Domains

- Application Security
  - Trust boundaries for SDLC/ Trusted VM image/ Secure inter-host channels/ “DMZ” hardening
- Encryption & Key Mgt
  - Separation of cloud provider encryption & key mgt/ standards in contract language/ App developers
- Identity & Access Mgt
  - Federated strategy & arch & standards/ Strong auth & pw policies exceed internal standards/ Identity service providers

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Domains

- Storage
  - Trust boundaries/ storage retirement/ seizure/ long term archiving/ multi-tenant encryption & key mgt
- Virtualization
  - 3rd party protection, hardening guidelines, provisioning/ traffic across VM backplane/ admin access

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Summary

- Cloud Computing is real and transformational
- Cloud Computing can and will be secured
- Broad governance approach needed
- Tactical fixes needed
- Combination of updating existing best practices and creating completely new best practices
- Common sense not optional

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Call to Action

- Shared responsibility with users, providers, associations, governments
- Seek to improve our guidance
- Seek to improve our domains of knowledge
- Partner to accomplish all of above

Next Steps

- Hold regional CSA Meetups in conjunction with other associations
- Participate in discussions & announcements on LinkedIn
- CSA organizing global meetup for Version 2.0 of Guidance first week of June
- Other research initiatives and events being planned

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Thank You!

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