

Auditing Security, Resilience and Controls in the Cloud...and Beyond

Information Technology environments are changing faster than ever. The very meaning of an application or a data center is constantly evolving and is today very different than it was even a few years ago. The data center as we have always known it is giving way to a variety of services: the cloud, managed services, colocation facilities, applications and infrastructure as services. The challenges and solutions of securing and controlling this new environment are discussed in detail. This period of change in the industry offers IT auditors, security professionals and Business Continuity/Disaster Recovery Planners a singular opportunity to architect controls from the outset. This is a two-day seminar, combining lecture with a hands-on, case-study based workshop. It introduces participants to the systems architecture concepts and practices that are being used to use to design, build and audit security, resilience and controls into this service-oriented world of information systems.

Intended audience: Information Security managers and staff, IT Auditing managers and staff, Disaster Recovery Planners, Business Continuity Planners, Risk Managers and staff, I.T. management, technical support and operations personnel, application developers

Learning objectives: Participants in this seminar will learn:

- How the traditional IT architectural model is disappearing
- What are the alternative models for operating, securing and controlling information systems
- What are the leading techniques for building security into these service-oriented environments
- How to build in resilience to mitigate the risks of unacceptable downtime and data loss
- How systems are being designed using the multi-modal infrastructure building blocks: colocation, managed services, outsourcing, software and infrastructure as services, operating in the cloud
- The value and issues involved in Disaster Recovery as a Service
- Understanding the commercial marketplace for these services
- Assessing the effectiveness of a multi-modal architecture

Seminar outline:

- A. The Disappearance of the Data Center
 - a. Business and technology drivers
 - b. Alternative technologies
 - c. *Case Study Assignment #1*

- B. Infrastructure of the Cloud
 - a. Cloud deployment models
 - b. Inside the cloud
 - c. The commercial marketplace
 - i. Cloud service providers
 - ii. Colocation facilities
 - iii. Hosting/managed services

- C. Networks and Applications in the Cloud
 - a. Cloud networking

- b. Network reliability
 - c. Applications in the cloud
 - d. *Case Study Assignment #2*
- D. Planning for Migration to the Cloud
- a. Organizational change
 - i. Information Security
 - ii. IT Operations
 - iii. IT Audit
 - iv. Business Continuity Management
 - b. Controlled migration
 - c. *Case Study Assignment #3*
- E. Colocation Sites and Cloud Data Centers
- a. Uptime Institute Tier ratings
 - b. Physical infrastructure
 - c. Control processes
 - d. *Case Study Assignment #4*
- F. Information Security in the Cloud
- a. Physical access control
 - b. Logical access control/Identity management
 - c. Encryption
 - d. Monitoring access
 - e. Incident management
 - f. Human resources
 - g. *Case Study Assignment #5*
- G. Multi-Modal Security Architecture
- a. Shortcomings of current security architectures
 - b. Zero Trust Architecture
 - i. Next generation firewalls
 - ii. Cloud access security brokers
 - iii. Anomaly detection
 - iv. Security zones
 - c. Central Point of Reference
 - d. *Case Study Assignment #6*
- H. Resilience in Multi-Modal Environments
- a. Cloud resilience
 - b. Colocation resilience
 - c. Disaster Recovery as a Service (DRaaS)
 - d. *Case Study Assignment #7*
- I. Audit and Assessment of Multi-Modal Environments
- a. Audit steps
 - b. Assessment steps
 - c. Audit and assessment tools
 - d. Service organization audits
 - e. Trust Service Criteria
- J. Conclusion

Seminar logistics: This is a two-day seminar/workshop (16 hours). Because of the intensive case study workshop, the seminar attendance should be limited to approximately 35 people.

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