

# NICF-Legal and Regulatory Considerations in Cloud Computing

**For Whom**  
Anyone seeking to exploit the benefits of cloud computing technologies

**Duration**  
3 days

**Prerequisites**  
A basic familiarity with Microsoft Windows, the Internet and the Web surfing

**Venue**  
STMI@NUS  
ICube, Level 3  
21 Heng Mui Keng Terrace,  
Singapore 119613  
stmi@nus.edu.sg

## Course Overview

Cloud computing is revolutionizing all aspects of IT, including hardware, operating systems and applications. The movement to cloud computing is the disruptive change that organizations will soon face as this service-oriented computing model begins to have an effect on the modern enterprises. IT and business managers must learn how to leverage both the business and technical benefits and identify risks and challenges in cloud computing. This course introduces the participants to the fundamentals of cloud computing and aims at providing participants with a solid understanding of managerial and legal concerns to be addressed during the process of cloud computing implementation.

Throughout the course, the participants will learn how to design a cloud implementation strategy that maximizes cloud computing performance while minimizes risk for organizations. Special emphasis is given to planning and implementing a cloud computing business strategy which covers multiple managerial concerns such as cloud computing readiness assessment, designing and deploying cloud services, cloud service governance, management and security control, and cloud contract negotiation and design. The course is based on case studies from real-world experience of early adopters of cloud computing. The participants will receive hands-on exercises including evaluating cost benefits of a cloud solution, assessing the tools for building applications to leverage cloud elasticity, analyzing cloud contracts, and specifying cloud adoption and migration plan.

## Programme Benefits

- Understand the value, opportunities and risks of adopting cloud computing
- Learn to assess the architectures, components, operation and tools of cloud computing
- Exploit the best practices for leveraging cloud computing models to optimize cost and resources
- Design and deploy a cloud implementation strategy that minimizes risks for your organization
- Design and deploy cloud security policy and negotiate cloud service contract

**CLOUD COMPUTING FUNDAMENTALS**

- What are cloud architecture and delivery models
- What are major differences across the available delivery models of cloud computing
  - Differentiating types of clouds: public, private, and hybrid
  - Understand the role of operators and web service providers in different cloud computing models: SaaS, IaaS, and PaaS
- How to evaluate the benefits and challenges of cloud products, including Amazon Web Services, Google, Microsoft Azure, Salesforce.com and others

**CLOUD COMPUTING READINESS ASSESSMENT**

- Where to start and how to prepare for the implementation of cloud computing
- How will cloud computing impact your organization
  - Strategic impact
  - Financial impact
  - Risk impact
- What are the implementation issues across security, compliance and business continuity
- What are the key security risks inherent in using cloud-based applications
- Why are current information security solutions not suitable for addressing security risks on the clouds

**CLOUD COMPUTING DELIVERY MODEL DEPLOYMENT**

- How to deploy Software as a Service (SaaS) to optimize productivity and collaboration
- How to deploy Platform as a Service (PaaS) to streamline application deployment
- How to deploy Infrastructure as a Service (IaaS) to protect your cloud investments against rapid technology & application changes
- How to integrate multivendor cloud products and services
- What is Cloud Brokerage and how to implement it
- How to migrate enterprise applications to cloud computing

**CLOUD COMPUTING LEGAL AND REGULATORY REQUIREMENTS**

- What are the relevant legal, regulatory and security requirements for the cloud environment
  - Current standards and frameworks for cloud services (e.g., ISO/IEC 27000 series – Information Security Management, NIST)
  - Security risks and security practices relevant to a cloud environment
- What are the legal aspects of storage data and operational risk factors to overcome for the adoption of cloud services
- How to design and implement organizational policy and procedures to comply with legal and regulatory requirements
- What are the current trends of government's initiatives for cloud computing regulation
  - By industries (e.g., IDA IM8F – Information Management, Computer Misuse Act, MOH Medical Record Retention Policy, etc)
  - By countries (e.g., US Data privacy law, European Union's data security law, and related Asian Pacific countries' legislations)

**CLOUD COMPUTING CONTRACT NEGOTIATION AND DESIGN**

- Analyzing current and future computing requirements
- Negotiating cloud service-level warranties
- Safeguarding assets, security, and access in the cloud
- Avoiding vendor lock-in
- Vendor's and client's responsibility during transition and migration period

**Course Leader**

Dr. Chen Yuanyuan is an Assistant Professor in the Department of Information Systems at the National University of Singapore (NUS). She joined NUS in September 2008 after she received her Ph.D. (2008) and LL.M (Master of Law) degrees from Emory University (USA). She also holds a LL.M degree from National Huaqiao University (China) and is a certified lawyer in China. Dr. Chen's current research focuses on management of IT-enabled services and cloud computing. Her research covers the following areas: (1) negotiation and design of cloud computing contracts/service level agreements; (2) data security and privacy in cloud computing; and (3) cloud computing standards and inter-cloud interoperability. Her research on cloud computing contract design is widely accepted and cited by academic scholars and IT professionals. Recently, Dr. Chen received National University of Singapore Young Investigator Award for her research about data management policy in cloud computing. Her work has been published in many top academic journals such as *Information Systems Research* and *Journal of Singapore Academy of Law*.