



Cloud Computing - Discovering its Power

Part of UC Berkeley's Professional Series in Cloud Computing

Date

28 - 30 March 2011,
8.30am – 7.30pm

Venue

Next U @ NTUC
Trade Union House
73 Bras Basah Road

Course Fees

\$5,000 per module

Discounts are available
for the following:

- **Early Bird**
Register before 25 Feb 2011
- **Group Registration for 3 or more students**
- **NTUC Members**
- **Partner Association Members**
(SITF, SCS & ITMA)
- **Registration for full program**
(i.e. all 4 modules)

Funding of up to
50% available!*

Register Now!

Seats are limited!
For registration or enquiries,
please call **6837 8388** or
email us at
pme@nextu.com.sg

*Terms & Conditions apply.
Please call 6837 8388 for details.

Course Introduction

Discover why cloud computing is at the forefront of a change that is rapidly spreading across the Internet.

Learn how Cloud Computing lowers costs, provides faster/better service, and increases flexibility to deliver a powerful new business model for both users and providers of Internet-based services. This introductory course is meant to provide an in-depth overview of the field of cloud computing and provide a framework for skillfully selecting the best combination of cloud technology to exceed business requirements. The framework includes business model drivers, technical theory, and comparison to historical alternatives. In addition, students will build a working technical knowledge of cloud computing, including the basics of Cloud security, and be able to create an online cloud account.

Who will Benefit

- Corporate Strategists
- IT Directors
- CIOs
- IT Managers
- Solution Consultants
- Communication Consultants
- Product Managers
- Product Marketers
- Pre-Sales Engineers
- Network Administrators
- IT Architects
- Hardware system architects
- Storage system designers

Course Objectives

Upon successful completion, students are able to:

- Understand the historical technical and business model evolution leading up to modern Cloud Computing
- Compare and contrast Cloud Computing's business model & benefits with those of traditional client/server
- Understand why and how Virtualization is the foundation upon which Cloud Computing is based
- Comprehend fundamentals of virtual machines from a management perspective
- Understand the various key features of a virtual machine from a management perspective
- Understand typical applications of Cloud Computing in key sectors
- Understand the impact of Cloud Computing on the evolution of traditional IT roles
- Understand the shortcomings of Cloud Computing and countermeasures to mitigate them
- Comprehend the basics of Cloud Security
- Analyze Cloud options from various vendors and determine which is the most important for the type of Cloud applications they wish to build
- Understand the steps needed to create an online cloud account
- Assess a company's readiness to deploy Cloud solutions and determine suitability of Cloud solutions for a particular business
- Understand the steps needed to prepare for Cloud deployment in companies

Pre-requisites

There are no formal prerequisites for the course.

However, it is recommended that in addition to having a general idea of how computers work, students should:

- a) Know how to program or script in one or more languages (such as C or Java)
- b) Be somewhat comfortable with UNIX/Linux,
- c) Have had exposure to any virtual computing environment (open source or otherwise),
- d) Be able to install software as root user or administrator

Instructional Methodology

Classroom instruction will contain:

- Lectures
- Group Discussions
- Class Participation
- Quiz

Course Outline

1. History of IT evolution leading up to Virtualization

2. What is Virtualization and Cloud Computing?

- History of Virtualization
- CPU
- Memory
- Storage
- Networks

3. Why Virtualization is important to Cloud Computing?

4. Why has Cloud Computing become so important now?

5. Discussion on the benefits of Cloud Computing

- Financial advantages:
What makes Cloud Computing cost effective?
 - i) What are the additional cost savings and technical complications in making Cloud Computing cost effective?
- Green IT advantages
 - i) Why is Cloud Computing a key element of "Greening by IT"?

6. What are the different types of Cloud Computing?

7. Technical & business models of Cloud Computing

- IaaS, PaaS and SaaS

8. Impact of Cloud Computing in various industries/sectors

- Banking and Finance
- Healthcare
- Public Sector
- Military

9. Roles in the new Cloud Computing eco-system

- How each traditional role in the IT world must evolve to realize the full potential of Clouds for companies

10. Key steps and requirements to building a Cloud

- Internal Cloud
- External Cloud

11. Overview of various vendor Cloud software and services: Pros and Cons from an independent viewpoint

- Service providers and Enterprise-specific concepts/approaches

12. Video conference with Silicon Valley-based Cloud experts from VMware and/or Linux to discuss their companies' perspective and approach to Cloud Computing and product philosophy

13. Public Case Studies - Successful examples of Cloud Computing applications explained: Amazon, Google, and Salesforce.com.

14. In-class interactive demonstration of how to make an online cloud account

15. Overview of Agile Computing Methodology

16. How to build a Cloud using Agile Computing Methodology

17. Berkeley view of Cloud Computing: Evolution and Trends

18. Dangers and downsides of Cloud Computing

19. Cloud security and counter-measures

20. In-class interactive demonstration(s) of virtualization/cloud solutions (may be by guest lecturer(s) from market leading vendors e.g. Microsoft, Redhat & VMware)

21. How companies can assess their readiness for deploying Cloud solutions and select the best solution for their business

22. Steps needed by companies to prepare for successful Cloud deployment

