CLOUD COMPUTING – 2 DAY COURSE

Day 1

Introduction to Cloud Computing

Defining cloud computing

- Components of a computing cloud
- Differentiating types of clouds: public, private and hybrid

Delivering services from the cloud

- Categorizing service types
- Comparing vendor cloud products: Amazon, Google, Microsoft and others

Adopting the Cloud

Key drivers of cloud computing solutions

- Instantaneous provisioning of computing resources
- Tapping into an infinite storage capacity
- Cost-effective pay-as-you-use billing models

Evaluating barriers to cloud computing

- Handling sensitive data
- Aspects of cloud security
- Assessing governance solutions

Exploiting Software as a Service (SaaS)

Characterizing SaaS

- Streamlining administration with centralized installation
- Optimizing cost and performance with scale on demand

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Comparing service scenarios

- Improving collaboration with business productivity tools
- Simplifying business process creation by integrating existing components

Inspecting SaaS technologies

- Deploying web applications
- Implementing web services: SOAP and REST
- Choosing a development platform

Delivering Platform as a Service (PaaS)

Exploring the technical foundation for PaaS

- Specifying the components of PaaS
- Analyzing vendor PaaS provisions
- Selecting an appropriate implementation

Building services with solution stacks

- Evaluating the architecture of vendor-specific platforms
- Becoming familiar with service platform tools

Managing cloud storage

- Controlling unstructured data in the cloud
- Deploying relational databases in the cloud
- Improving data availability

Employing support services

- Testing in the cloud
- Monitoring cloud-based services
- Analyzing portability across platforms

Building a Business Case

Calculating the financial implications

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- Comparing in-house facilities to the cloud
- Estimating economic factors downstream

Preserving business continuity

- Selecting appropriate service-level agreements
- Safeguarding access to assets in the cloud
- Security, availability and disaster recovery strategies

Migrating to the cloud

- Rearchitecting applications for the cloud
- Integrating the cloud with existing applications
- Selecting a vendor and avoiding vendor lock-in

Day 2

Virtualization, Taxonomy and related technologies

- Two Technologies for Agility
- The Traditional Server Concept
- Hypervisors and Virtual Machines
- Cloud Characteristics
    - Goal 1 — Cost Control
    - Goal 2 - Business Agility
    - Goal 3 - Stick to Our Business
- Cloud Service Models
- Cloud Taxonomy
- Data Centers

Architecture, Sourcing, Storage

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- Cloud Architecture
- Different Cloud Computing Layers
- Software as a Service (SaaS)
- Virtualization
- Cloud-Sourcing
- Cloud Storage
- Amazon Simple Storage Service (S3)
- Utility Computing – EC2

Advantages / Disadvantages of Cloud

- Advantages / Disadvantages of Cloud Computing
- Web-Scale Problems
- Different Computing Models
- Cloud Computing Zen
- Flynn's Taxonomy

Cloud Computing Demo and Practice

- AWS
- Google Cloud
- CloudBerry

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