eogogicsinc

Course ID	Course Title
CLOUD1	**Understanding, Designing, and Implementing Cloud Computing**
Course Duration	
2 days	

Related Courses

- NextGen Networks (NGN) Explained: For All Audiences (N-NGN, a half day e-learning course)

- IP-Based Systems: TCP/IP and Mobile IP (IPSYS, 2-3 days)

- Multimedia Applications: IMS, SIP, and VoIP (MULTIMEDIA, 2 days)

- VoIP: Protocols, Design, and Implementation (VOIP, 2-3 days)

- State-of-the-art of VoIP Technology for Professionals, Managers, and Executives (VOIP-EXEC, 1 day)

- Future of Wireless: WiMAX, LTE, OFDM/MIMO (FUTURE, 1-2 days)

- 4G Technologies & Services: For All Audiences (W-4G, a half day e-learning course)

Aimed At

This course is aimed at IT and telecommunications professionals, business planners, managers/executives, marketing specialists, and others who need to understand cloud computing in order to improve business operations, deliver better services to clients, or make cloud computing implementation decisions.

Group Size

5-25

Prerequisites

Those wishing to take this course should have a basic knowledge of IT, Internet, and telecommunications.

Course in a Nutshell

Cloud computing may be the newest IT and telecom buzzword, but it's a reality backed up by advances in computing hardware, telecommunications, wireless devices, and related technologies. There is also a growing need based on the way people use information to do their jobs.

This course will help you understand the key issues involved in evaluating, designing, and implementing cloud computing for a wide range of businesses. We will begin with a discussion of what cloud computing is and the various levels of cloud service. We will consider the advantages and disadvantages of clouds as well as the economics of cloud computing. We will then apply all this information to help you evaluate if cloud computing is right for your business. We will cover the state of the industry, and examine the offerings of major cloud providers, including their particular services, their pricing models, and some user experiences. We will talk about how to buy cloud services, and how to transition to the cloud. We will conclude with a look at the question of whether it makes sense to set up your own cloud rather than relying on an outside provider.

Customize It!

Let us know your reasons for studying cloud computing so we can customize the course to your specific needs. If you do not possess prior knowledge of IT, telecom, and the Internet, the course can be expanded to three days to cover these topics. The course can also be expanded by one day to consider your particular organization in greater depth (prior consultation required for us to learn about your organization).

Learn How To

- Understand what a cloud environment is and what its advantages are

- Determine if a cloud solution is right for your organization

- Know the various cloud providers and the scope of their offerings

- Plan and implement a cloud solution

- Add value to your organization with a cloud solution

Course Outline

- What is cloud computing?
  - Definition
  - Characteristics
  - Paradigm shift represented by cloud computing
  - The big paradigm battle: Google vs Microsoft
- Enabling technologies
  - Advances in IT, telecom, Internet
  - Virtualization
  - Ubiquity of "thin client" devices
  - Availability of broadband/WiFi/3G/4G
- The three (or four) levels
  - Software as a Service (Saas)
  - Platform as a Service (PaaS)
  - Infrastructure as a Service (IaaS)
- Why are people doing it now?
  - Vendors
  - Customers
- Types of clouds
  - Private
  - Community
  - Public
  - Hybrid
- What are the advantages/disadvantages of a cloud?
  - Lower upfront costs; IT assets are "rented", not owned; lower TCO
  - Reduced internal IT management and support burden
  - Increased agility and faster time-to-market
  - Optimal resource utilization

- Short-term commitment
- Short-notice provisioning
- Simplified procurement for some services
- More up-to-date technology without need for repeated procurements
- Better ability to absorb transient demand peaks
- Better/easier collaboration
- Better/easier remote access to key data
- Fewer programs on user devices needing maintenance/upgrading
- Optimizing business model

- Cloud computing economics
  - Supply side
  - Demand side
  - Track record

- Is cloud computing right for your business?
  - Training
  - Types of users in your organization
  - Changes in way applications behave
  - Need to survey stakeholders
    - Cost
    - Staff (early adopters or resistant to change?)
    - Goals
    - Needs
    - Resistance?
    - Legacy applications
  - Can you build consensus?
    - Do you have to change organization culture?
    - Need to show how cloud makes doing job better/faster/easier
    - Explain increased functionality available with cloud services
  - User perspective
    - What's in it for me?
    - Why is cloud better for me in my job?
  - Need to work offline/without connectivity

- Issues/concerns
  - Complexity/difficulty of actually transitioning to cloud
  - Concerns about peak/average hour demand
  - Security
    - Data may be safer in cloud setting than on laptops or tablets
    - Security claims/guarantees offered by providers
  - When does moving to cloud make sense or not make sense?
  - Control
  - Access
  - Functionality

- o Data protection
- State of industry
  - o Major players
  - o Types of offerings
  - o Provider supplied apps and third party apps (marketplace)
  - o Service levels
    - SLAs
    - Confidentiality agreements
- Survey of some major cloud offerings
  - o Microsoft Azure in depth
    - Service model
    - Pricing model
    - User experience
  - o Google Apps in depth
    - Service model
    - Pricing model
    - User experience
  - o Amazon EC2 in depth
    - Service model
    - Pricing model
    - User experience
  - o AT&T cloud
    - Service model
    - Pricing model
    - User experience
- How to buy cloud services
  - o Analyzing your needs
  - o Choosing a cloud provider
  - o Matching your needs to offerings
  - o Estimating costs and savings
- Transitioning to cloud
  - o Planning and assessment
    - Which apps to move to/use on cloud
    - What data should move to cloud?
    - Staging transition
    - Verifying connectivity/access
    - Dealing with problems
    - Time frame
  - o Preparing users
  - o Pilot program
  - o Local expert training
  - o Training of all users
    - Tech, peer, moral support
    - Who are best trainers?
- Setting up your own cloud

- o When your own cloud makes sense
  - ▪ Type of organization
  - ▪ Unique requirements
  - ▪ Size, geographic distribution
- o Advantages
- o Problems, pitfalls

- Some case studies
- The cloud and your particular organization (custom, optional)
- Course recap
- Evaluation

How You Will Learn	• A highly qualified Information and Communications Technologies (ICT) expert/instructor will present this course in interactive lecture format. • Along with the lecture, we will use exercises to enrich the instruction and drive home the essential points. • If you already know something about the technology, we will build on that. We'll compare and contrast what's familiar with what's new, making the new ideas easier to learn as well as more relevant. • If your background is less technical, we will use meaningful and ingenious examples and analogies to simplify the complex subject matter. • You will receive a printed Participant Handbook which will help you remember and retain what you learned in class and apply it on your job.

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