

Cloud Computing Course Content:35-40hours

Course Outline

Introduction to Cloud Computing Defining cloud computing

- Components of a computing cloud
- Differentiating types of clouds: public, private, 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
- Handling varied loads with elasticity and seamless scalability
- 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
- Minimizing the need for local hardware and software
- Streamlining administration with centralized installation and updates
- Optimizing cost and performance with the ability to scale on demand 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, 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
- Leveraging the power of scalable middleware

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 Deploying Infrastructure as a Service (IaaS)

Enabling technologies

- Scalable server clusters
- Achieving transparency with platform virtualization
- Elastic storage devices Accessing IaaS
- Provisioning servers on demand
- Handling dynamic and static IP addresses
- Tools and support for management and monitoring

Building a Business Case Calculating the financial implications

- Analyzing current and future computing requirements
- 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
- Technical considerations
- Rearchitecting applications for the cloud
- Integrating the cloud with existing applications
- Avoiding vendor lock-in Planning the migration
- Incremental vs. one-step solution
- Selecting a vendor
- Establishing staff skill requirements