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 billingmodels

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 hardwareand 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