

CLOUD COMPUTING COURSE CONTENT

Cloud Computing Information

- 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
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