

This course provides foundational knowledge in Cloud Computing components, foundational technologies, architecture, design, and business value. Attendees are provided with a broad survey of Cloud Computing concepts and given an opportunity to explore Cloud from multiple angles.

Audience

- Information Technology Architects, Developers, Business Analysts, and Managers

Prerequisites

- No formal knowledge or skill requirements

Course Length

- 2 days

Teaching Methods

- Lectures
- Hands-on workshops

Learning Objectives

- The Rise of the Cloud
- The Cloud Value Proposition
- Cloud Computing Components
- Categorizing Cloud
- Real World Case Studies
- Cloud Risks and Risk Mitigation
- Adopting Cloud Computing
- Cloud Infrastructure and Tools
- Cloud Security
- Cloud Layers
- SOA and The Cloud
- Virtualization and The Cloud
- Web 2.0 and The Cloud
- SaaS and The Cloud
- Developing for the Cloud

Course Outline

WTE10

The Rise of the Cloud

- Objectives
- From Mainframe to Client-Server
- From Client-Server to N-Tier Web
- From Web to Service Orientation
- The Evolution of Grid Computing
- Virtualization, Virtualization Everywhere
- From ASPs to SaaS
- Moving Services to the Cloud
- Cloud Computing Recipe

The Cloud Value Proposition

- Objectives
- The Cloud Value Framework
- Typical Business Cases
- Business Case #1
- Business Case #2
- Business Case #3
- Emerging Business Cases
- Potential Business Case #1
- Potential Business Case #2

Cloud Computing Components

- Objectives
- Cloud Computing Recipe
- Cloud Component – SOA
- Applying SOA to the Cloud
- Cloud Component – Virtualization
- Applying Virtualization to the Cloud
- Cloud Component – RIA / Web 2.0
- Applying RIA / Web 2.0 to the Cloud
- Cloud Component – SaaS
- Applying SaaS to the Cloud
- Cloud Component – Grid Computing
- Applying Grid Computing to the Cloud

Real World Case Study Analysis

- Objectives
- Case Study – *Amazon*
- Problem Domain
- Cloud Value for Amazon
- Analyzing Amazon's Cloud Solution
- Discussion Question
- Case Study – *Google Apps*
- Problem Domain
- Cloud Value for Google
- Analyzing Google's Cloud Solution
- Discussion Question
- Case Study – *SalesForce.com*
- Problem Domain
- Cloud Value for SalesForce
- Analyzing SalesForce's Cloud Solution
- Discussion Question
- Case Study – *TuneCore*
- Problem Domain
- Cloud Value for TuneCore
- Analyzing TuneCore's Cloud Solution
- Discussion Question
- Case Study – *Pitney Bowes*
- Problem Domain
- Cloud Value for Pitney Bowes
- Analyzing Pitney Bowes's Cloud Solution
- Discussion Question

Opportunities and Risks

- Objectives
- Understanding Cloud Types
- Data Clouds
- Service Clouds
- Interface Clouds
- Understanding Cloud Scope
- Public clouds

- Opportunities and Risks
- Private clouds
- Opportunities and Risks
- Hybrid Clouds
- Opportunities and Risks
- Evaluating Cloud Potential

Cloud Infrastructure and Tools

- Objectives
- Infrastructure and Tools Overview
- Enterprise Components
- Run-time Components
- Design-time Components
- Requirements and Recommendations
- Build vs Buy Analysis
- Vendor Selection Criteria

Cloud Adoption Strategies

- Objectives
- Pragmatic Adoption
- Wholesale Adoption
- Wholesale Pros/Cons
- Layered Adoption
- Layered Pros/Cons
- Opportunistic Adoption
- Opportunistic Pros/Cons
- Selective Adoption
- Selective Pros/Cons
- Selecting a Strategy

This course provides foundational knowledge in Cloud Computing components, foundational technologies, architecture, design, and business value. Attendees are provided with a broad survey of Cloud Computing concepts and given an opportunity to explore Cloud from multiple angles.

Audience

- Information Technology Architects, Developers, Business Analysts, and Managers

Prerequisites

- No formal knowledge or skill requirements

Course Length

- 2 days

Teaching Methods

- Lectures
- Hands-on workshops

Learning Objectives

- The Rise of the Cloud
- The Cloud Value Proposition
- Cloud Computing Components
- Categorizing Cloud
- Real World Case Studies
- Cloud Risks and Risk Mitigation
- Adopting Cloud Computing
- Cloud Infrastructure and Tools
- Cloud Security
- Cloud Layers
- SOA and The Cloud
- Virtualization and The Cloud
- Web 2.0 and The Cloud
- SaaS and The Cloud
- Developing for the Cloud

Course Outline

WTE10

Cloud Security

- Objectives
- Cloud Security Risk Overview
- Cloud Protocol Stack
- Security Standards
- Internal Threats
- External Threats
- Countermeasures

Cloud Layers

- Objectives
- Cloud Service Layering
- Application Cloud Services
- Business Cloud Services
- Cloud Orchestrations
- Data Cloud Services
- Security Cloud Services

SOA and The Cloud

- Objectives
- Defining SOA
- The Role of SOA in the Cloud
- The Danger of Cloud without SOA
- SOA Acquisition Strategies
- Leveraging an Existing SOA Infrastructure
- Developing a New SOA Infrastructure
- Outsourcing Your SOA Infrastructure
- Summary

Virtualization and The Cloud

- Objectives
- Defining Virtualization
- The Role of Virtualization in the Cloud
- The Danger of Cloud without Virtualization
- A Word about Grid Computing
- Virtualization Acquisition Strategies
- Leveraging an Existing Virtualization Infrastructure
- Developing a New Virtualization Infrastructure
- Outsourcing Your Virtualization Infrastructure
- Summary

Web 2.0 and The Cloud

- Objectives
- Defining Web 2.0 and RIA
- The Role of the Web in the Cloud
- Does your Cloud Need a Face?
- Web 2.0 Acquisition Strategies
- Leveraging an Existing Web 2.0 Infrastructure
- Developing a New Web 2.0 Infrastructure
- Outsourcing Your Web 2.0 Infrastructure
- Summary

Developing for The Cloud

- Objectives
- To Cloud or Not to Cloud?
- A Look at Cloud Standards
- Cloud Computing Best Practices
- Developing Services for the Cloud
- Developing Software for the Cloud
- Migrating Existing Solutions to the Cloud
- Governing Cloud Computing Solutions
- Summary

Appendix A – Cloud Computing Glossary

Appendix B – Cloud Computing Roadmap