

Course Outline

Cloud Solutions Architect

Course Cloud Sol Arch: 3 days Instructor Led

About this course

This course is designed for technology professionals who architect the technology solutions that support the changing requirements due to the adoption of cloud computing. It's also designed to help organizations leverage the opportunities that cloud is creating.

Solution architects need to understand the impact that cloud is having on business and information architecture, application design, data management, and security architecture, and they need to be very familiar with the topology and ecosystems that are being created as a result of increasing adoption of cloud technologies and operating models.

This course is designed for senior technology professionals who are architecting and designing the future generation of technology solutions. The course materials include comprehensive reference materials that help to continue your educational experience after the course. The course prepares you for the Professional Cloud Solutions Architect (PCSA) certification exam provided by the Cloud Credential Council. The PCSA is endorsed, recognized, and supported by several key technology vendors and standards bodies. The content for this course, as well as the PCSA certification, is based on the cloud standards developed by the National Institute of Standards and Technology (NIST).

Audience profile

- Technology architects
- Application architects
- System architects
- Cloud strategy consultants
- Enterprise architects
- Senior developers

At course completion

After completing this course, students will be able to:

- History of cloud computing and its impact on business and IT Architecture
- Key engineering concepts of operating "as a Service"
- Impact of cloud computing on service management
- Consumer and provider perspectives on setting up cloud environments
- Evaluating a cloud solution architecture
- Migrating and transitioning to a cloud environment

Course Outline

1. HISTORY OF COMPUTING AND CLOUD COMPUTING

- Pros and cons of utility computing, grid computing and cloud computing
- The shift from virtualization to cloud
- Internet, sustainability, energy awareness and the emergence of tablets and smart devices on business
- Analyzes cloud-related monetization strategies and charging mechanisms

Course Outline

2. IMPACT OF CLOUD COMPUTING

- Innovative models and new forms of sourcing in creating cloud solutions
- Key risk, security and legal issues inherent in applying cloud solutions
- Outlines the correct variant architecture solutions in case-study scenarios

3. TECHNOLOGY ENGINEERING OF CLOUD COMPUTING

- Explain the implications of operating "as a service", factor in the relevant key engineering concepts to architectures
- Paradigm shifts and reference architectures and standards
- Practical difference between resource pooling and load balancing
- Deployment model and service type in a given scenario
- Pros and cons of the differing cloud solution architectures and their features

4. CLOUD COMPUTING SOLUTION ARCHITECTURES

- New cloud-enabled solution models (e.g., composite mash-up web apps, mobile, BYOD, Big Data)
- Deployment channel models (hosting, reselling, management cloud) on architecting cloud solutions
- Architecture options for different sized businesses based on a range of impact factors

5. CLOUD SERVICE LIFE CYCLE

- Control and management issues in different cloud deployment solutions
- Cloud life cycles
- Cloud solution characteristics for different deployment solution models

6. SERVICE TRANSITION AND SERVICE TRANSFORMATION

- Key features and issues of "running your business in the cloud" and "running IT as a business"
- Issues involved in certification and accreditation of a cloud solution
- Strategies to maximize the enablers and minimize the barriers of adopting cloud computing as a business option

7. CUSTOMER PERSPECTIVE ON SETTING UP CLOUD ENVIRONMENTS

- Business features of a consumer cloud solution architecture
- Prepare and plan a specific consumer cloud environment for a given scenario
- Key steps in setting up a consumer cloud environment

8. PROVIDER PERSPECTIVE ON SETTING UP CLOUD ENVIRONMENTS

- Explore the perspective of the cloud provider, take it into account when architecting a cloud environment:
- Key business features of a provider cloud solution architecture
- Specific cloud provider environment for a given scenario
- Key steps in setting up a provider cloud environment

Course Outline

9. CLOUD ECOSYSTEM

- Impact of wider concepts such as the "Internet of Things" and the "Internet of Everything" on the process of architecting cloud solutions
- Macro and micro drivers of business and technology ecosystems
- Changes for different stakeholders and investors
- Roles of consumer, provider and intermediary in the context of broader governance and policy

10. TYPES OF XAAS SOLUTIONS

- Historical development of cloud computing
- Future path to new cloud ecosystem solutions
- Types of XaaS solutions and service options and how functional and non-functional criteria can be determined
- Available options in XaaS that can be combined in strategic, capability and functional architectures, giving examples by technology and vertical industry exemplars

11. TARGETING THE RIGHT SOLUTION ARCHITECTURE

- Key design principles of XaaS and types of deployment scenarios
- Demand, supply and channel profiles and solution fit criteria in a given scenario
- Compare multiple solutions with inputs from technology, organizational and strategic implications
- Make vs. Buy, Write vs. Rent

12. MOCK EXAM