

Course ID
**CLOUD-
BRIEF**

Course Duration
1 day

**Related
Courses**

Course Title

Cloud Computing Business and Technology Briefing™

- Cloud Computing Market Briefing (CLOUD-MKT, 1 day)
- Cloud Computing Application Case Studies (CLOUD-APP, 1 or more days)
- Cloud Computing Architecture and Implementation (CLOUD-AI, 3-4 days)
- Cloud Computing Standards and Protocols (CLOUD-STND, 3-5 days)
- Cloud Computing Security (CLOUD-SEC, 3-5 days)
- Cloud Computing End-to-End (CLOUD-E2E, 1 day)

Aimed At

This briefing is suitable for all audiences.

Group Size

5-25

Prerequisites

There are no prerequisites for this course.

**Course
in a Nutshell**

Cloud computing in many ways is the “next new thing” but in many other ways it is the next generation of the old service bureau model. Cloud computing is attractive to businesses for many of the same reasons as the old service bureau but cloud computing also has many of the same pitfalls and perils. This briefing on cloud computing will explain the business and technology aspects of moving your business, or important parts of it, to the cloud.

Customize It!

This briefing can be scheduled as one full day standalone course, the first day of a multi-day course, or as six one-hour modules for delivery over the web. Any single module or selected modules may also be combined and scheduled for World Wide Web delivery.

Learn How To

- Build a compelling case for adopting Cloud Computing
- Build a compelling case for not adopting Cloud Computing
- Describe and differentiate Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service, and Data/Storage as a Service (DaaS)
- Plan the major steps of implementation of Cloud Computing
- Apply the primary standards and protocols of Cloud Computing
- Secure computing services delivered via a Cloud Computing model
- Describe end-to-end connections and major components of the four main Cloud Computing delivery models

Course Outline

Introduction (15 minutes)

A high level overview of the topic and the briefing.

Module 1: Market (1 hour)

Cloud Computing is one of the fastest growing technology areas today because it spans all industries and applications and gives customers the ability to use high cost/high value services as needed without the cost of purchasing and maintaining an entire infrastructure. This Module describes the market for Cloud Computing.

- The Case for Cloud Computing
- The Case Against Cloud Computing
- Description / Demographics
- Segmentation
- Dominant Competitors
- Market Performance
 - Historical
 - Current
 - Projected
- Outlook / Projections

Module 2: Application Case Studies (1 hour)

There are four generic case studies available for Cloud Computing. They cover Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service and Data/Storage as a Service (DaaS). Each module is available as a one hour module or as a 15 minute summary module allowing all three to be delivered in an hour. Ask your training consultant about industry specific case studies or about commissioning your own custom application case study. All case studies cover the following topics.

- **Background:** History and case study subject business and market overview.
- **Drivers:** Why did the case study subject make the decisions they made.
- **Architecture:** What is the system design for the case study application?
- **Procurement and Implementation:** How did the case study subject obtain and implement their application?
- **Migration and Training:** How did the case study company move from their old system to their new system and how was training accomplished?
- **Operations:** What are the ongoing operational issues of the case study application?
- **Return On Investment (ROI):** How does the case study company calculate their return on the investment of time and money that they made and how does that match real returns?
- **Total Cost of Ownership (TCO):** Taking into account all possible elements, how much does the application cost?

- **Expectations and Lessons Learned:** What were the expectations at the beginning of the project and what lessons were learned during the project?
- **Looking Ahead:** What are the case study subject's future plans?

Module 3: Architecture and Implementation (1 hour)

There are four predominant models for delivering Cloud Computing to the marketplace. All four of them are covered in this module in the context of the over-arching Cloud Computing architecture. This module also discusses implementation of cloud computing.

- Architectural Concepts and Glossary
- Front End vs Back End
- Layers
- Cloud Types
- Application Suitability for Cloud Implementation
- Service Level Agreements
- Implementation Examples
 - Infrastructure as a Service (IaaS)
 - Platform as a Service (PaaS)
 - Software as a Service (SaaS)
 - Data/Storage as a Service (DaaS)

Module 4: Standards and Protocols (1 hour)

The underlying protocols, message formats and exchanges are what make the architectures work. This section will review the predominant protocols, their standards and operation.

- Standardization Landscape
- ANSI/ INCITS: 8Gig Fibre Channel (8GFC)
- Distributed Management Task Force: Open Virtualization Format (OVF)
- IEEE
 - Convergence Enhanced Ethernet (CEE)
 - Fiber Channel over Ethernet/Data Center Bridging (FCoE/DCB)
 - Priority Flow Control (802.1Qbb)
 - End-to-End Congestion Notification (802.1qau)
 - Shortest Path Bridging (802.1aq)
 - Enhanced Transmission Selection (ETS) (802.1Qaz)
- IETF Standards: TRILL (Transparent Interconnect of Lots of Links)
- InfiniBand Trade Association: InfiniBand
- Open Grid Forum: Open Cloud Computing Interface (OCCI)
- Storage Networking Industry Association: Cloud Data Management

Interface (CDMI)

- The Role of Representational State Transfer (REST)

Module 5: Security (1 hour)

Cloud computing has many dimensions but security considerations overall can be grouped into three meta-categories, which are covered here. There are also a wide range of security concerns about systems that support cloud computing - such as client, transport and server issues - that are not addressed here.

- Security and Privacy
 - Data Protection
 - Identity Management
 - Physical and Personnel
 - Availability
 - Application Security
 - Privacy
- Lower Layer Security
- Security Guidance for Critical Areas of Focus in Cloud Computing
- Cloud Controls Matrix
- Top Threats to Cloud Computing
- CloudAudit
- Compliance
 - Logs and Audit Trails
 - Unique Industry Compliance Requirements
- Legal and Contractual Issues
 - Public Records
 - Disclosure
 - FOIA/Open Records

Module 6: End-to-End (1 hour)

An example of end-to-end communications of the same application four times with four different cloud implementations for purposes of comparison, highlighting the role of various components and their functionality in Infrastructure as a Service (IaaS) example, Platform as a Service (PaaS) example, Software as a Service (SaaS) example, and Data/Storage as a Service (DaaS) example.

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS)
- Data/Storage as a Service (DaaS)

Review and Summary (15 Minutes)

A review of the briefing topics and summary of the program.

**How You Will
Learn**

- A seasoned instructor will present this course in interactive lecture format.
- Along with the lecture, we will use group activities to enrich the class and drive home the important points.
- If you already know something about this field, we will build on that knowledge. We'll compare and contrast what's familiar with what's new, making the new ideas easier to learn as well as more pertinent.
- If your background is less technical, we will use meaningful examples and analogies to break down the subject matter complexity.
- You will receive a printed Participant Handbook which will help you remember and retain what you learned in class and apply it on your job.

Revised

November 2, 2011f