



AUM

American University Of The Middle East

Management Information Systems MIS 300

Textbook/material required: Haag, S., & Cummings, M. (2009). Management information systems for the information age. 9 th ed. McGraw-Hill, Inc.

Chapter 7: Systems Development

Cloud Computing: (**pages 203-208**)

Business Continuity Planning: (**pages 212- 215**)

Cloud Computing. p.203

- **What is cloud computing?**

- “...is a technology model in which any and all resources-application software, processing power, data storage, backup facilities, development tools... literary everything- are delivered as set of services via the Internet.” (p. 203)

- **The principle is simple:**

- Rather than buy expensive hardware and software for the running of your business, you **rent it** as a service!
- However, you access your software and hardware processing services **via the internet.**



Cloud Computing. p.204

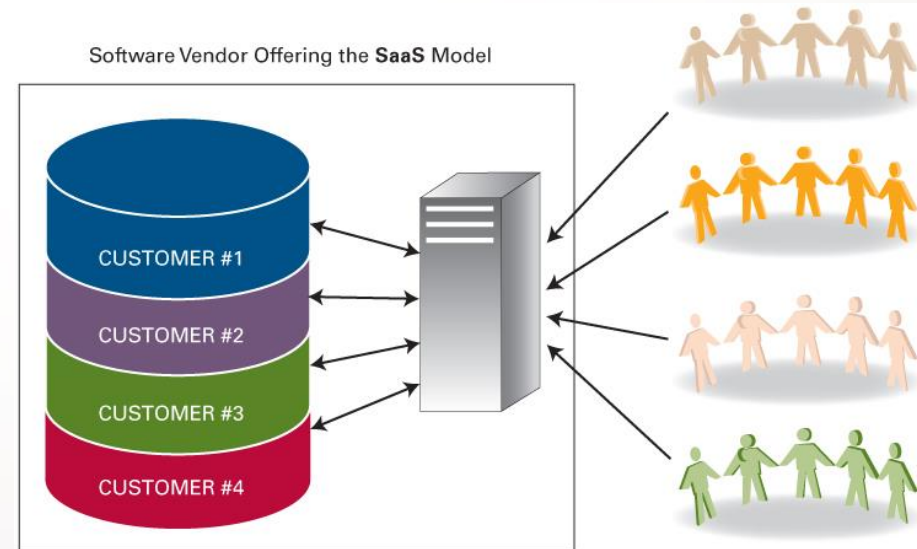
- ***In Practice:***

- Many small to medium companies have used similar principals for their websites by having a 'hosting' company to run their website services.
- With Cloud computing, the scale of it is the novelty because in effect a company can run little or all its operations from the 'Cloud'! This is called '***pay-as-you-go' metered model.***
- An organization is able to scale its operation adding and removing services as business expands or shrinks. This is called :***Real-time scalability.***

Cloud Computing. p.204

What is on offer (Implementations of the Cloud):

- **Software-as-a-Service (SaaS):** Paying for software as 'pay-per-use' service rather than paying for the software outright.
 - It could be Accounting software, HR software, Engineering Software, or any application.
 - Used in the same concept we all use 'Facebook'.
 - Same interface, Same functionality, Same tasks
 - But content is different based on your login and activities.
 - Supports **multi-tenancy** - multiple people can simultaneously use a single instance of a piece of software.

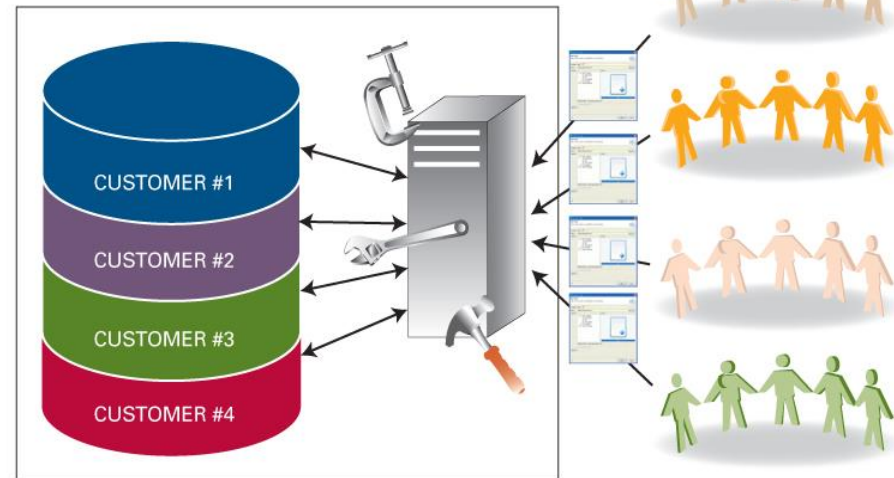


Cloud Computing. p.205

What is on offer (Implementations of the Cloud):

- **Platform-as-a-Service (PaaS):**

- Goes beyond (SaaS)- allowing users to modify displays, how reports are generated, processing by using the application tools and adding/changing modules.
- So while SaaS may have lots of 'pre-built' features, PaaS allows users to modify these features and create their own.
- Access are available to re-program, test, and run customized displays.





Cloud Computing. p.206

What is on offer (Implementations of the Cloud):

- **Infrastructure-As-A-Service (IAAS)**

- We rent the software, what about the hardware?
- We are not speaking about 'physical' hardware, we still need Computers, printers, and modem for the internet.

➤ **What can you rent in IAAS:**

- Extensive Storage that can be accessed from anywhere.
- Network equipment
- Operating Systems.
- Backups
- Processing power
- Anti-virus and protection software/hardware.



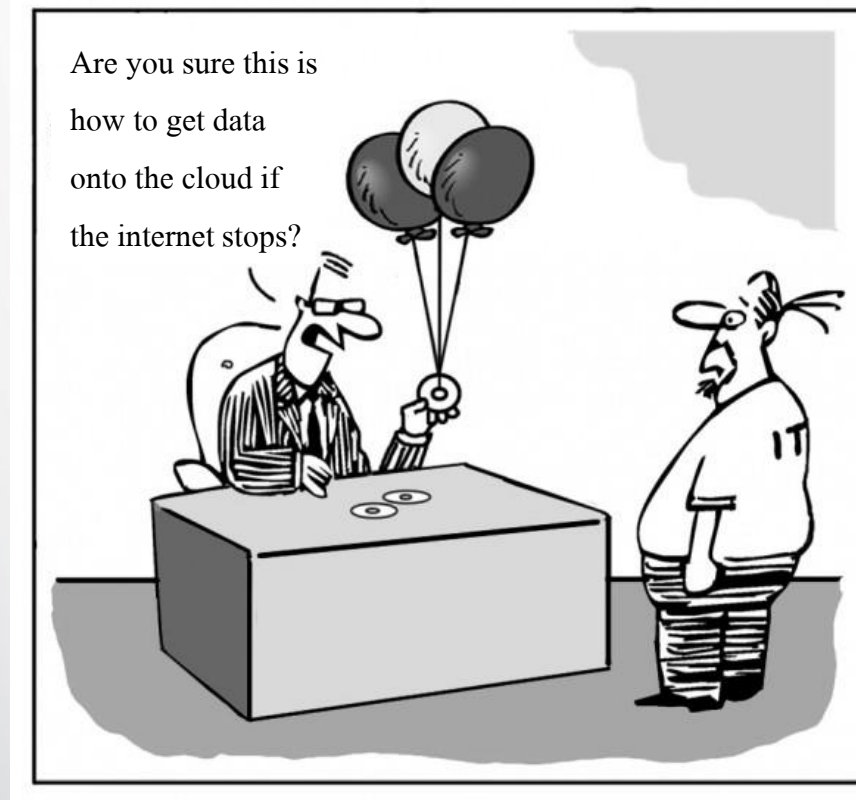
Cloud Computing. p.208

- **Benefits of Cloud Computing:**

- Cheaper option than buying the equipment outright. **“Lower Capital Expenditure”**
- Easier to start up your business. **“Lower Barrier to entry”**
- **Immediate access** to a broad range of application software.
- Buy as little or many as you want and scale up or down as you need. **“Real-time scalability”**

Cloud Computing

- **But is it risk free???**
 - What would happen if your Internet service stops?

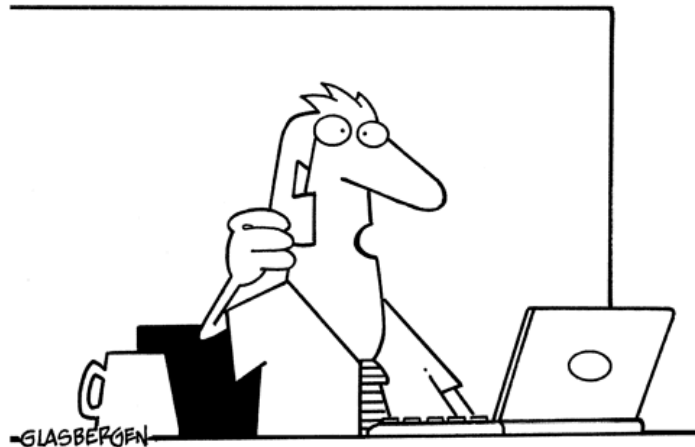


Cloud Computing

- **But is it risk free???**

- How secure is your data and software will depend on the experience of your provider is.

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**“Are you sure our data is secure on the cloud?
I just saw my spreadsheet on the weather channel!”**

Cloud Computing

- **But is it risk free???**

- What would happen if your provider goes bankrupt or stops operating for any reason?



Fingers crossed the piece of server we got off
ebay is where our customer's data is stored!!

BUSINESS CONTINUITY PLANNING.

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□ ***Business continuity planning (BCP)*** –

rigorous and well-informed organizational methodology for developing a ***business continuity plan***, a step-by-step guideline defining how the organization will recover from a disaster or extended disruption

- BCP is very necessary today given terror threats, increased natural disasters, etc

■ BCP METHODOLOGY

1. Organizational strategic plan
2. Analysis
3. Design
4. Implementation
5. Testing
6. Maintenance



1. Organizational Strategic Plan:

- It all starts here
- The strategic plan defines what is and what is not important
- You must have a business continuity plan for what is important

2. Analysis:

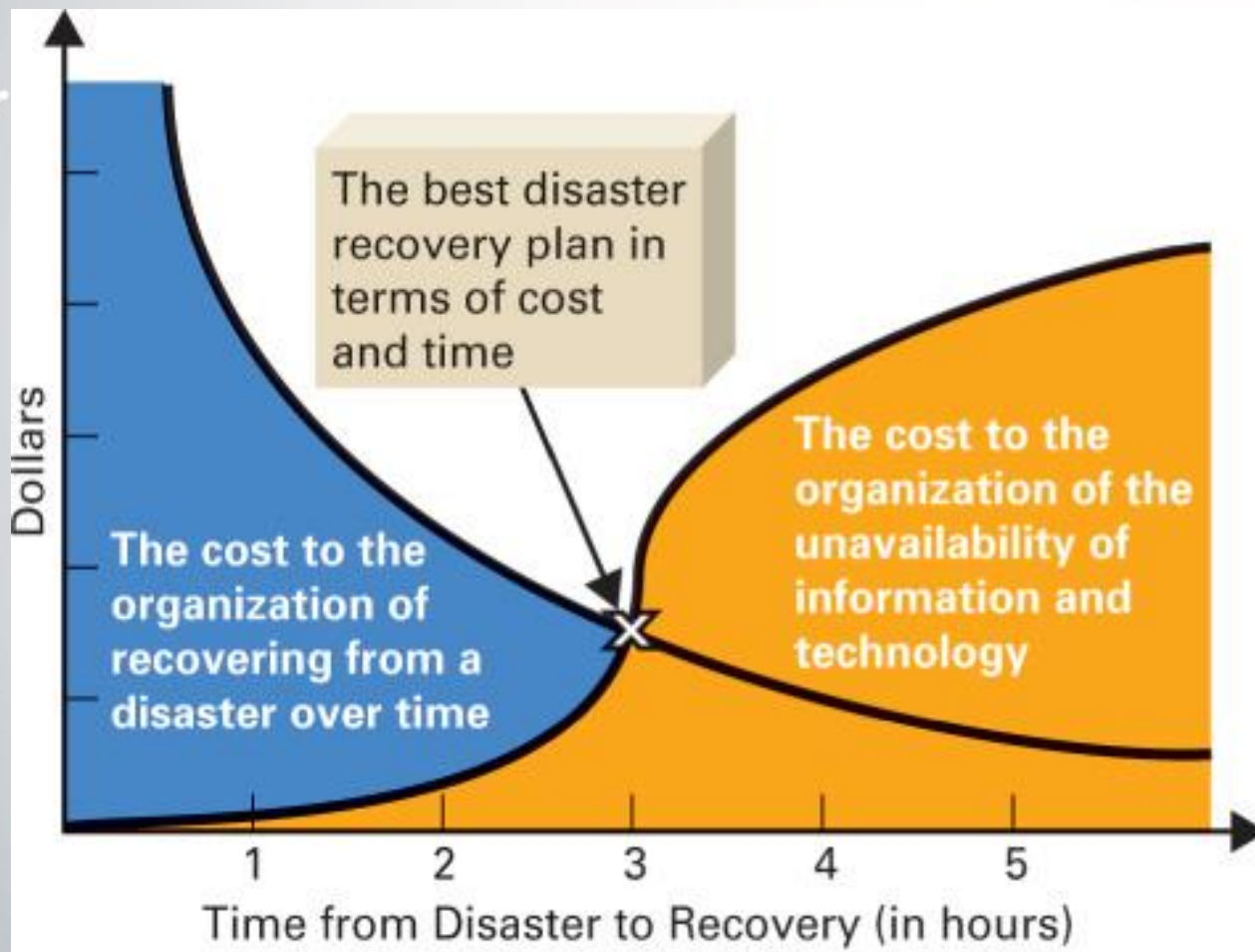
IN the BCP analysis phase, we perform...

- Impact analysis – ***risk assessment***, the process evaluating IT assets, their importance, and tendency/ susceptibility to threat.
- Threat analysis – document all possible major threats to organizational assets.
- Impact scenario analysis – build worst-case scenario for each threat.
- ***Requirement recovery document*** – identifies critical assets, threats to them, and worst-case scenarios.

3. Design:

- Build ***disaster recovery plan***, detailed plan for recovering from a disaster. May include
 - ***Collocation facility*** – rented space and telecommunications equipment
 - ***Hot site*** – fully equipped facility where your company can move to
 - ***Cold site*** – facility where your company can move to but has no computer equipment

3. Design:



Disaster recovery plan should include a **disaster recovery cost curve**, which charts the cost of unavailable information/technology compared to the cost to recover from a disaster over time.

4. Implementation:

- Engage any businesses that will provide collocation facilities, hot sites, and cold sites
- Implement procedures for recovering from a disaster
- Train employees
- Evaluate each IT system to ensure that it is configured optimally for recovering from a disaster

5. Testing:

- As opposed to traditional SDLC, testing in BCP methodology occurs after implementation
- Simulate disaster scenarios
- Have employees execute disaster recovery plans
- Evaluate success and refine as necessary

6. Maintenance:

- Perform testing annually, at a minimum
- Change business continuity plan as organizational strategic plan changes
- Evaluate and react to new threats
- No “system” is ever complete