Cloud Computing

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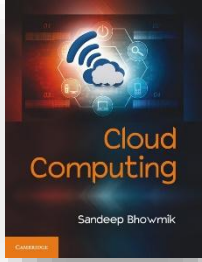
Chapter 1

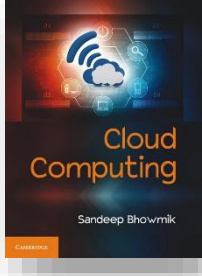
Introduction

Cambridge University Press



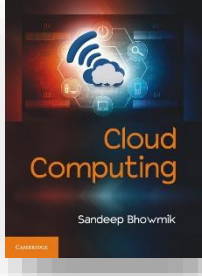
What is the Buzz About?

- Cloud computing is the next step of accessing web based services through Internet.
- It provides means for smarter way of doing computing and business.
- Cloud computing became a hot topic only from mid-2008, but the idea is age old.
- The limitations of the traditional computing approaches make the stage ready for its arrival.



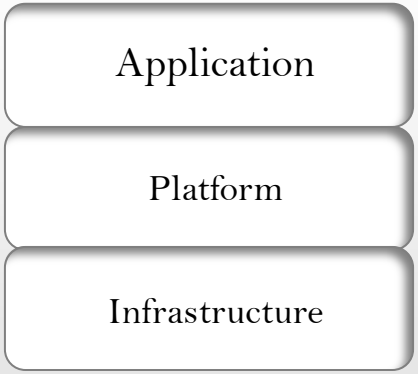
Limitations of Traditional Computing Approaches

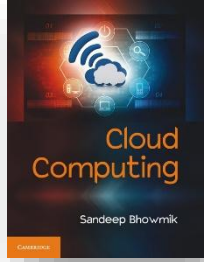
1. Require huge initial investment.
2. System maintenance is the headache of user.
3. Procures hardware gets outdated periodically.
4. Software up-gradation headache.
5. Resource capacity estimation is a tedious task.
6. Resource requirement may vary (increase or decrease) with time.
7. Resource addition/alteration needs complete system shutdown.
8. Less resource utilization results in reduced ROI.
9. For computing, users generally need to have physical access to the system.



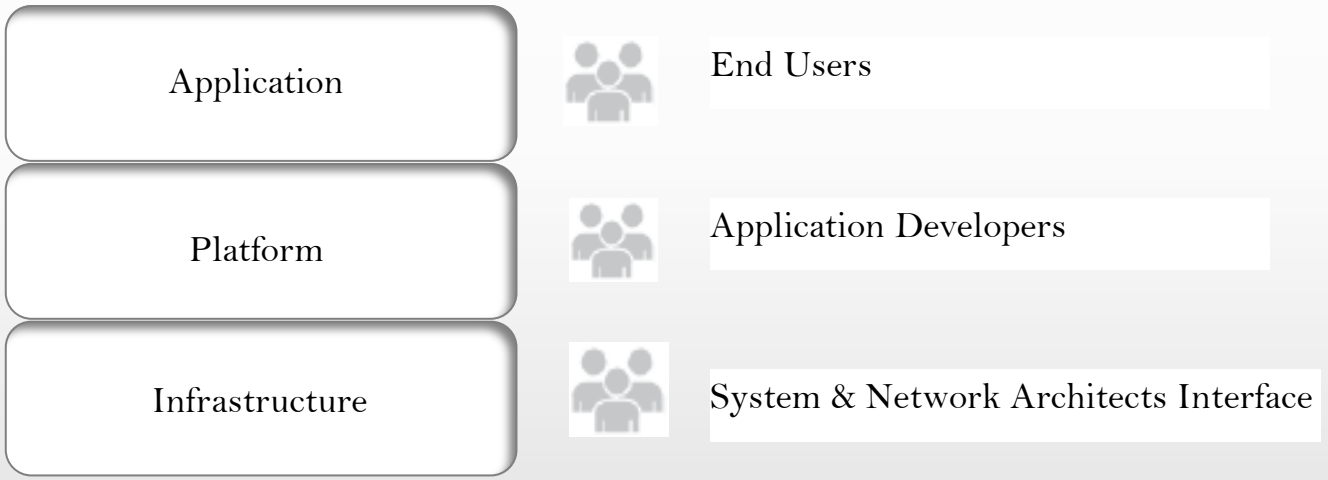
Three Layers of Computing

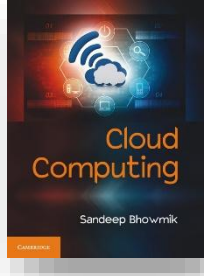
- Infrastructure
- Platform
- Application



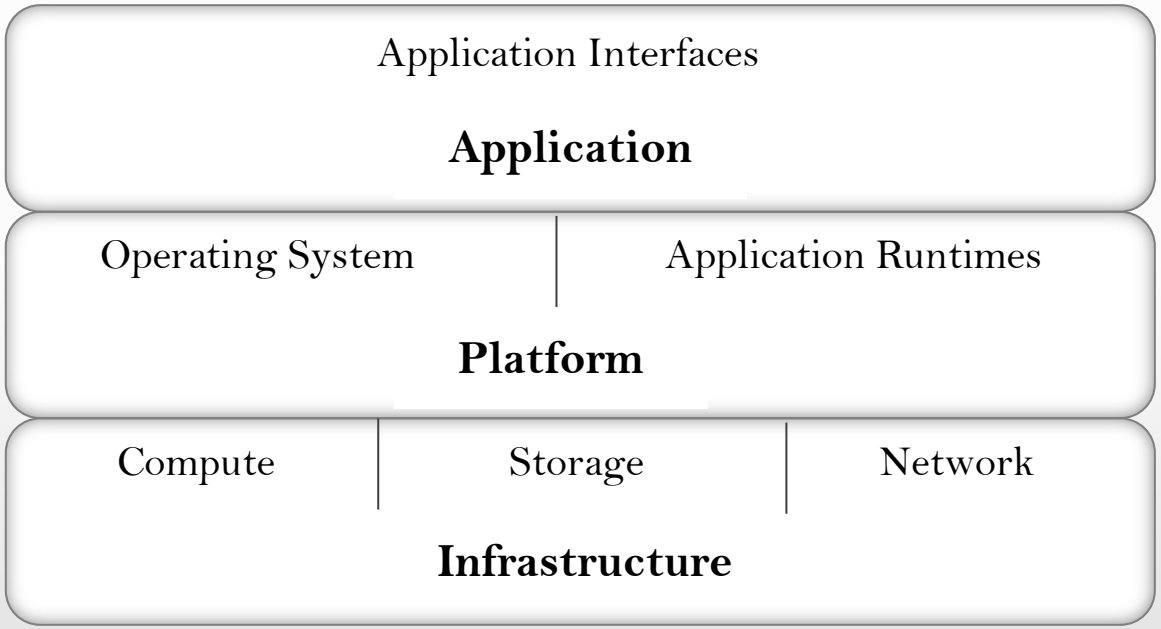


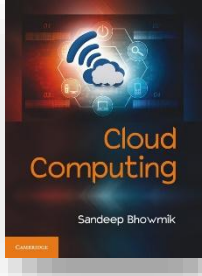
Users of three different computing layers





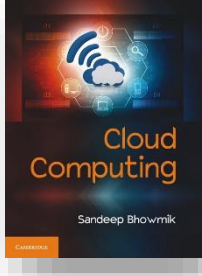
Different constituents of the three layers





Three layers in Traditional Computing

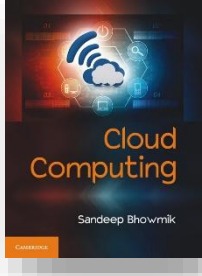
- The boundaries between computing layers were not very clear to general users.
- End users unknowingly had to bear the burden of being concerned about all the three computing layers.
- Subscribers of one computing layer can't fully escape the responsibilities and headaches of arranging or managing the underlying layer(s).



Computing as Utility Service

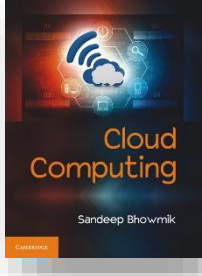
- Utility model provides lots of flexibilities compared to traditional way of computing.
- The three layers of computing, are delivered as utility services in cloud computing model.
  - Infrastructure Service
  - Platform Service
  - Application or Software Service

- Independent Software Vendors (ISV) provide the utility computing services.



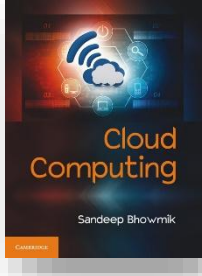
You are already using Cloud Computing

- E-mail services
- Picture or video sharing services
- Social networking sites



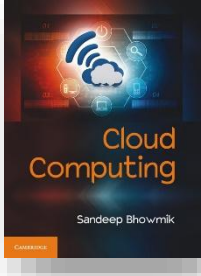
Influences behind Cloud Service Adoption

- Technological Influences
  - Universal Network Connectivity
  - High-Performance Computing
  - Commoditization



Influences behind Cloud Service Adoption (Contd.)

- Operational or Business Influences
  - Low-Cost Solution
  - Outsourcing
  - Speed or Responsiveness
  - Automation
  - Small Initial Investment
  - Less Maintenance Cost
  - Mobility
  - Flexibility



Thank You