



SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)

Re-accredited by NAAC with A+ grade, Accredited by NBA(CSE, IT, ECE, EEE & Mechanical)
Approved by AICTE, New Delhi, Recognized by UGC, Affiliated to Anna University, Chennai

DEPARTMENT OF COMPUTER APPLICATIONS

COURSE

23CAE717
Cloud Computing

UNIT I

Cloud Architecture
and Model

TOPIC

Cloud EcoSystem

Semester

II Semester /
I MCA



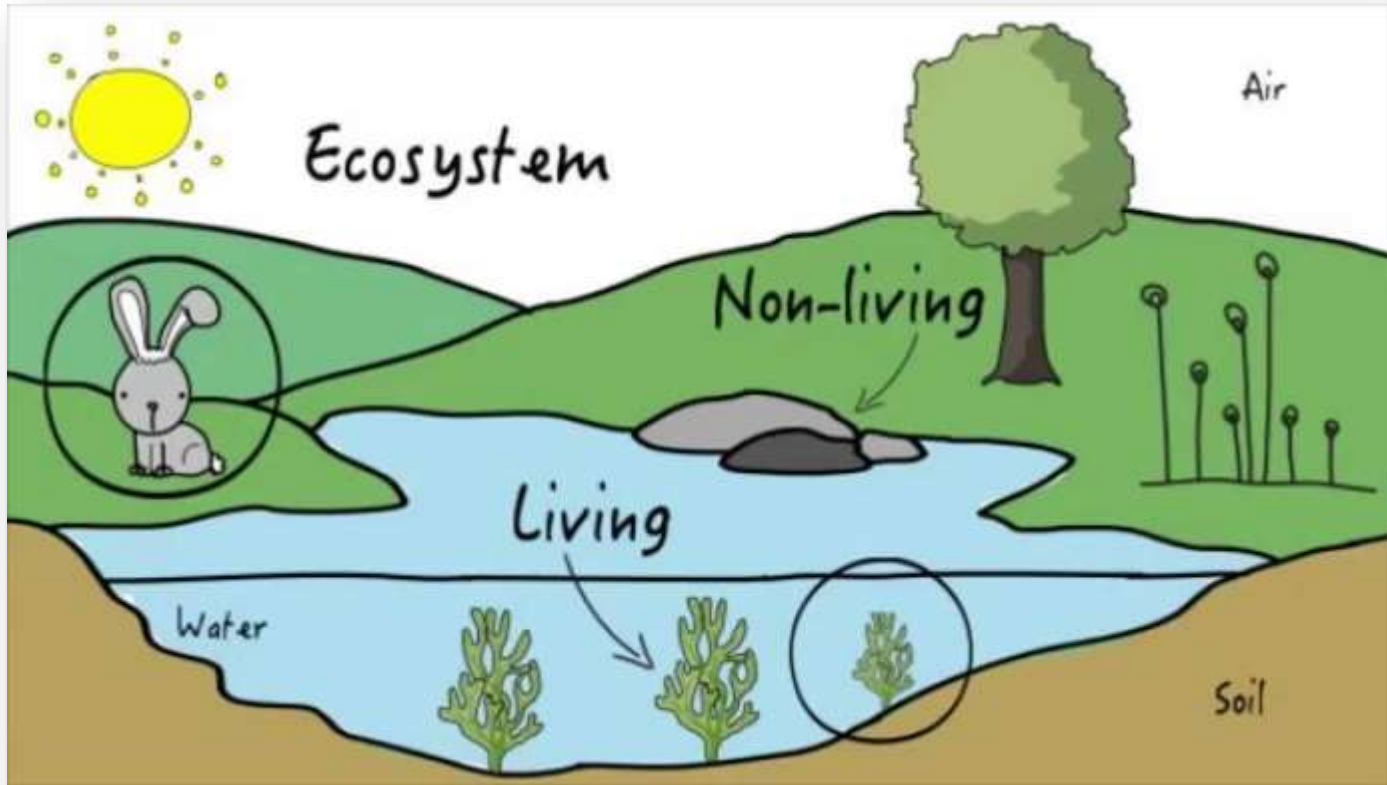
UNIT I NETWORK TECHNOLOGIES



- ❖ Technologies for Network-Based System
- ❖ System Models for Distributed and Cloud Computing
- ❖ NIST Cloud Computing Reference Architecture
- ❖ Cloud Models:- Characteristics – Cloud Services Cloud models (IaaS, PaaS, SaaS)
- ❖ Public vs Private Cloud –Cloud Solutions
- ❖ Cloud ecosystem
- ❖ Service management
- ❖ Computing on demand



Recalling ?





Cloud Ecosystem



- ❑ A Cloud Ecosystem refers to the interconnected network of cloud computing services, solutions, technologies, and providers that collectively enable the delivery, management, and consumption of cloud resources and services.
- ❑ It includes
 - Determining the type of cloud environment suited
 - Developing your cloud adoption vision, including governance strategy, business outcomes, and project benefits
 - Establishing use cases and a detailed plan
 - Understanding the implications of adopting specific Cloud Service Layers



Enterprise Cloud Ecosystem



Business Support Services

Accounting & Billing

Auditing & Reporting

Availability & Continuity

Compliance and policies

Consumer service

Contract and agreement

Metering

Subscription

Operational Support Services

Capacity & performance

Inter-cloud

IT Asset & License

Rapid provisioning

Cloud security

Data protection

Privacy

Governance

Risk

Information security

Privilege

Vulnerabilities

Threats

Policy and standards

Performance

Monitoring

SLA enforcement

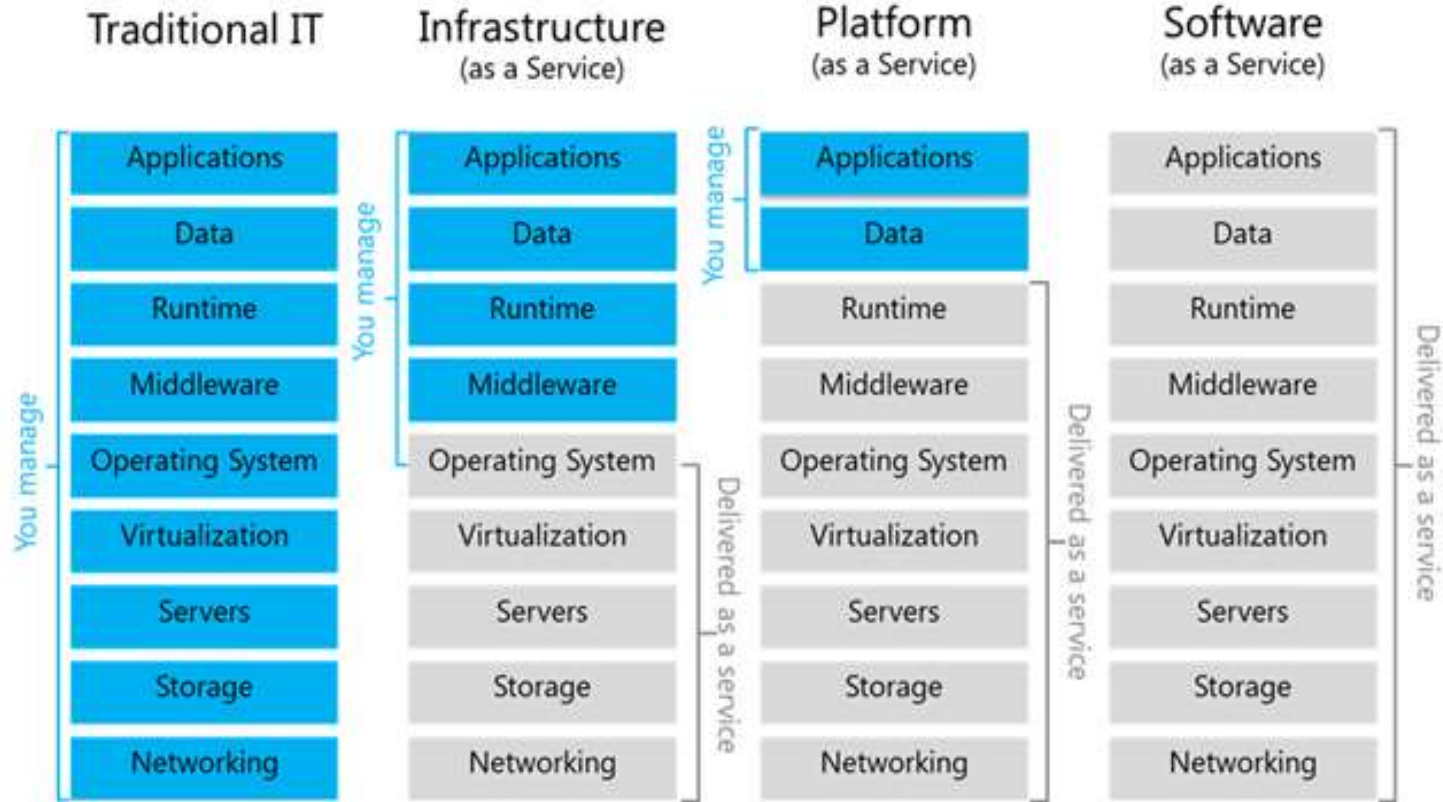
Others

Product /service ,
resource catalog

Portability –service,
data



Cloud Ecosystem





Actors in Cloud Ecosystem



- ❑ **Actors**
 - **Cloud consumer**
 - **Cloud service provider**
 - **Cloud service partner/broker**
 - **Cloud Auditor**

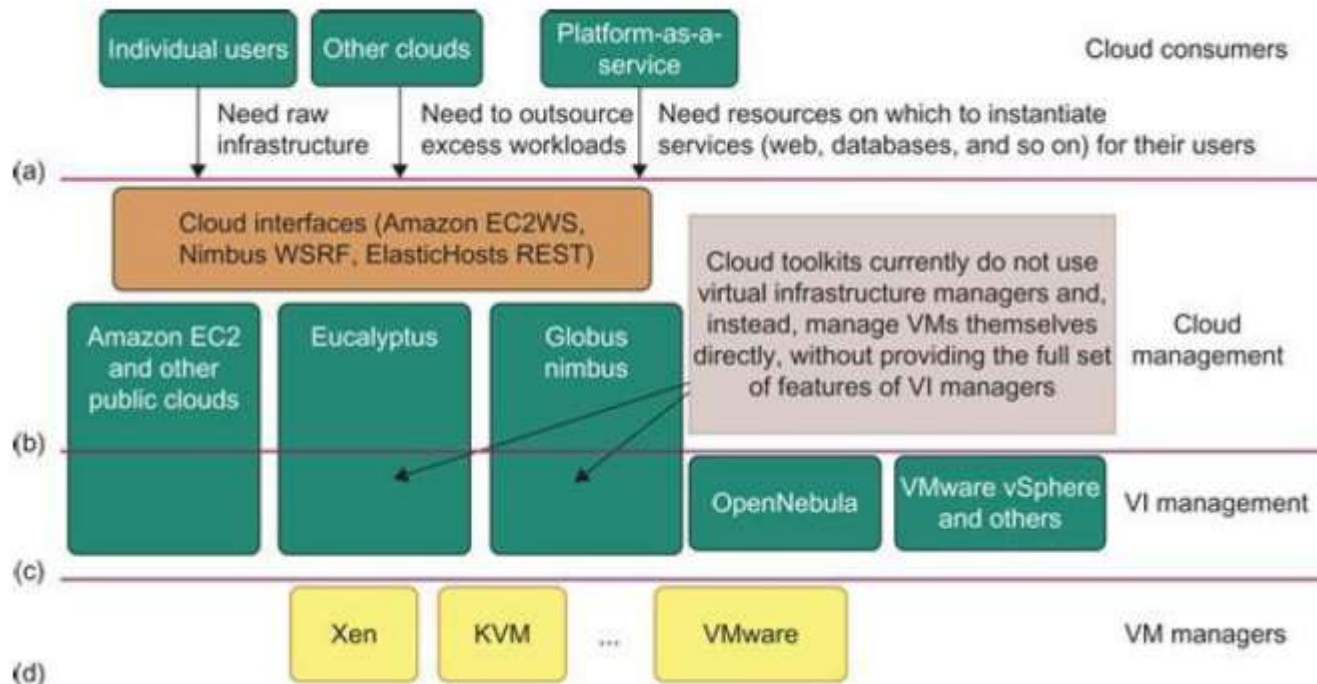


Cloud Ecosystem - Private

- ❑ There are four levels of ecosystem development
 - Consumers demand a flexible platform
 - Cloud manager provides virtualized resources over an IaaS platform;
 - VI manager allocates VMs;
 - VM managers handle VMs installed on servers

- ❑ Virtual Infrastructure (VI) tools support dynamic placement and VM management on a pool of physical resources, automatic load balancing, server consolidation, and dynamic infrastructure resizing and partitioning

Cloud Ecosystem - Private

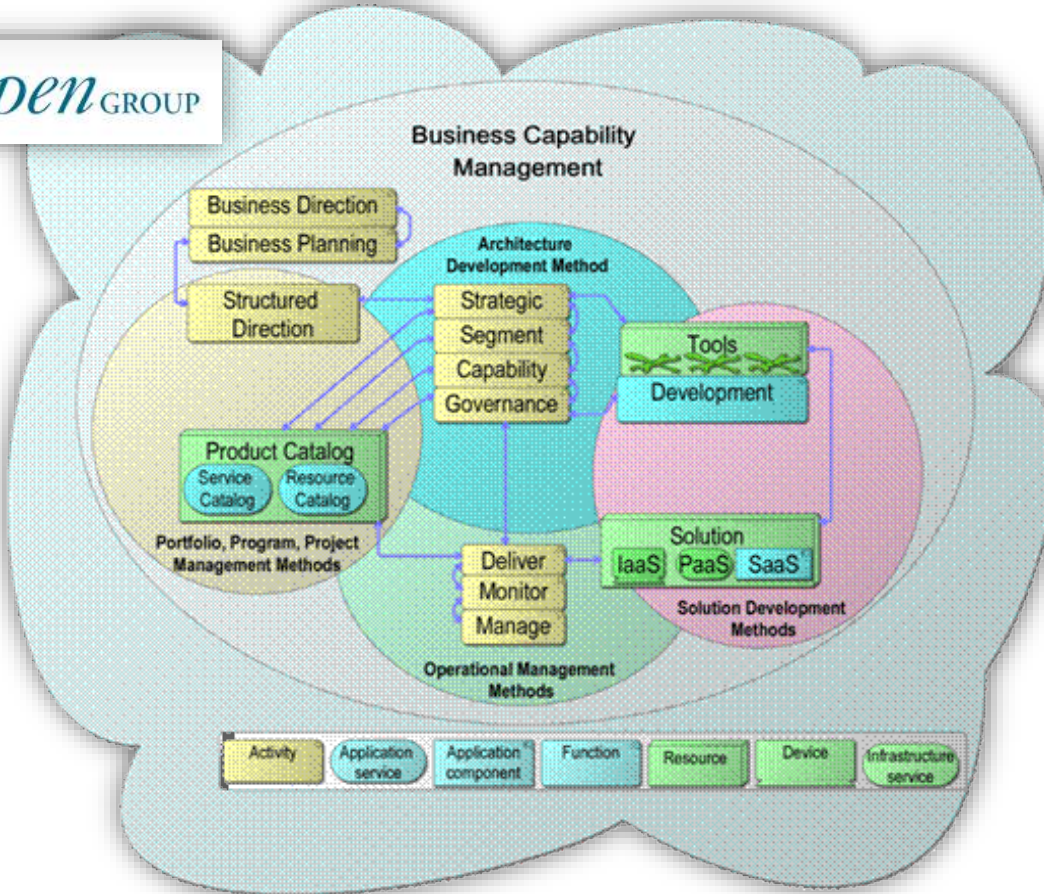




Cloud Ecosystem



THE *Open* GROUP





Example

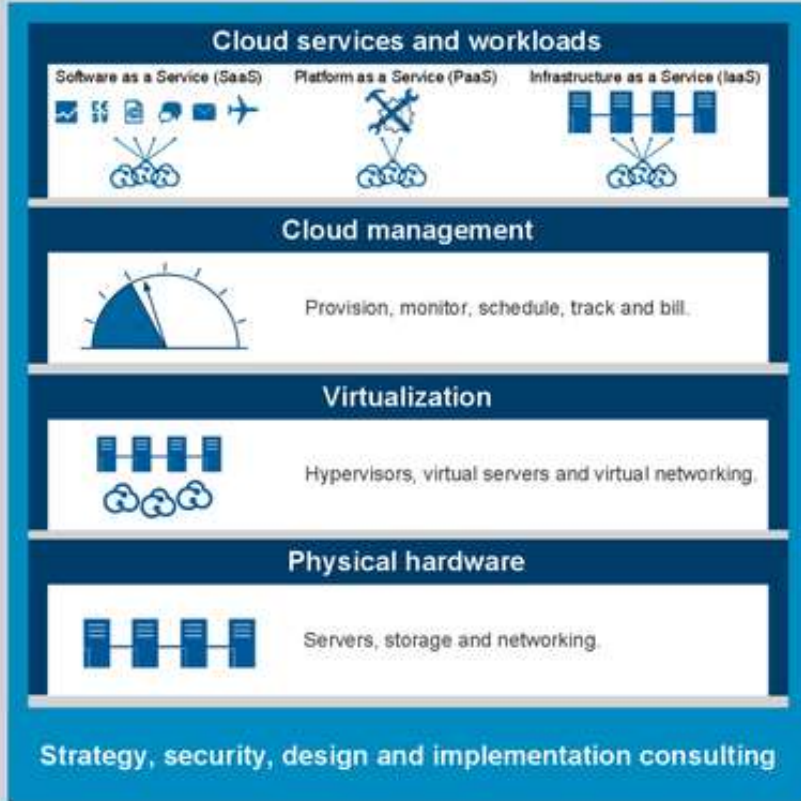




IBM Cloud

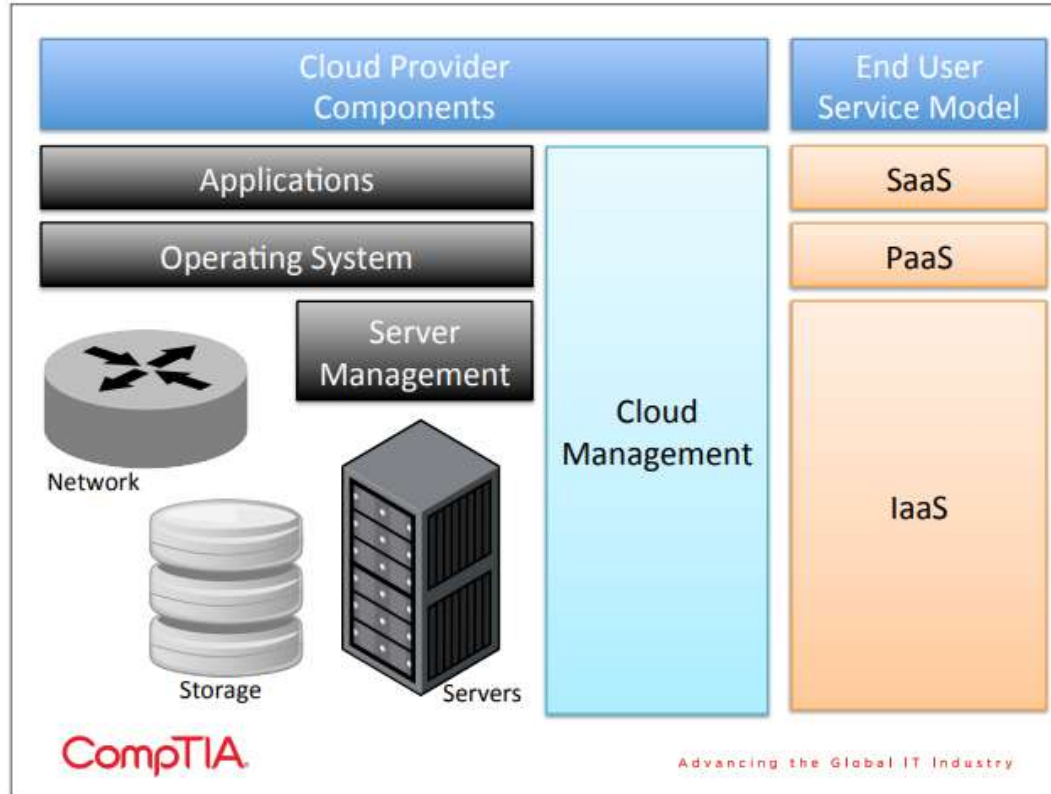


IBM SmartCloud delivered by public, private or hybrid models





Cloud Ecosystem – Example





References



- ❑ Kai Hwang, Geoffrey C Fox, Jack G Dongarra, “Distributed and Cloud Computing, From Parallel Processing to the Internet of Things”, Morgan Kaufmann Publishers, 2012
- ❑ James E. Smith, Ravi Nair, “Virtual Machines: Versatile Platforms for Systems and Processes”, Elsevier/Morgan Kaufmann, 2005.
- ❑ Kumar Saurabh, “Cloud Computing – insights into New-Era Infrastructure”, Wiley India,2011.
- ❑ Toby Velte, Anthony Velte, Robert Elsenpeter, “Cloud Computing, A Practical Approach”, TMH, 2009.
- ❑ John W.Rittinghouse and James F.Ransome, “Cloud Computing: Implementation, Management, and Security”, CRC Press, 201



ANY
QUERIES ?