



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35

An Autonomous Institution



Accredited by NBA – AICTE and Accredited by NAAC – UGC
with 'A++' Grade

Approved by AICTE, New Delhi & Affiliated to Anna
University, Chennai

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECE308- WIRELESS TECHNOLOGIES FOR IOT

III ECE / VI SEMESTER

UNIT 3 – DATA COLLECTION, STORAGE AND COMPUTING USING A CLOUD

PLATFORM

TOPIC 4 –Platform as a Service



What has IaaS done?



- IaaS provides virtual machines and resources such that IaaS vendors can segment resources for each user
- IaaS providers can also make users do not need to purchase the hardware
- IaaS can make better use of resources

But is it enough?



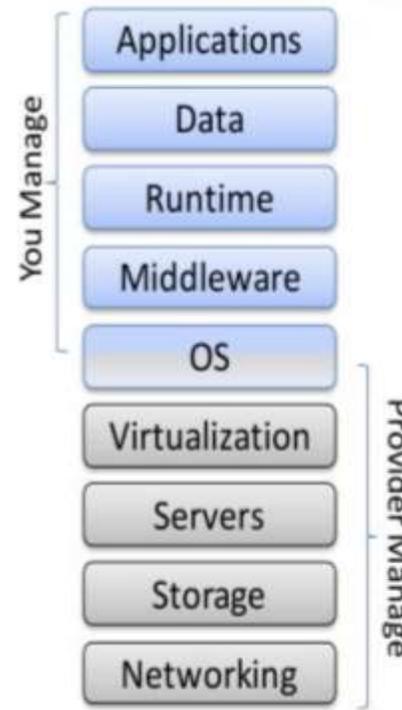
What IaaS can do?



- Traditional IT



- IaaS





IaaS is not enough



- IaaS provides many virtual or physical machines, but it cannot alter the quantity automatically
- Consumers might
 - Require automatic make-decisions of dispatching jobs to available resources
 - Need a running environment or a development and testing platform to design their applications or services



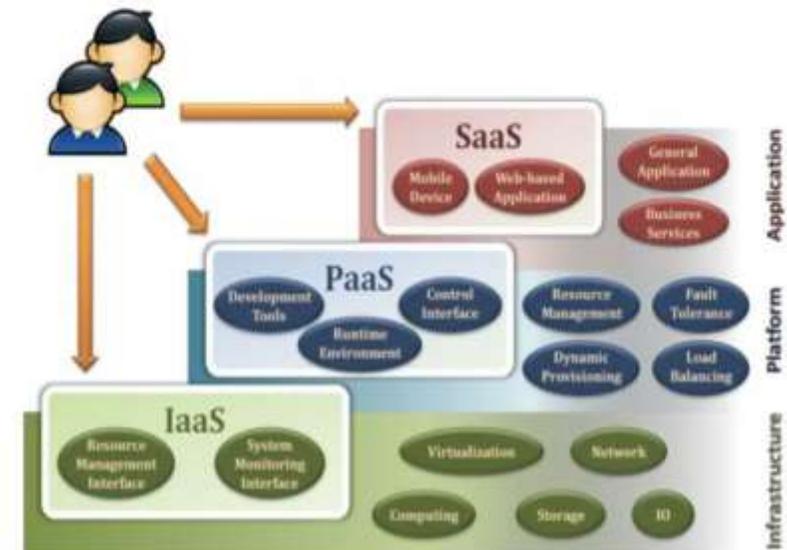
PaaS



- PaaS provides a series of properties that can satisfy user's requirements
- PaaS guarantees the quality of resources, services and applications



Platform as a Service (PaaS) is a computing platform that abstracts the infrastructure, OS, and middleware to drive developer productivity

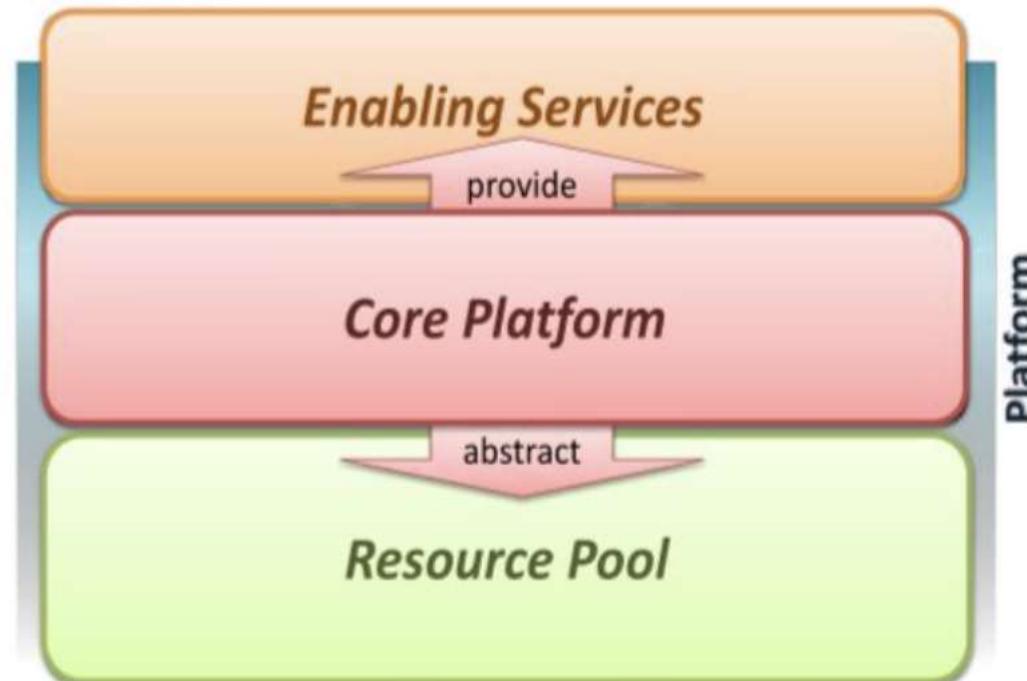




PaaS



- Deliver the computing platform as a service
 - Developing applications using programming languages and tools supported by the PaaS provider
 - Deploying consumer-created applications onto the cloud infrastructure





Resource Pool



- PaaS providers define the smallest unit of resource
 - 1GHz CPU computation ability
 - 1GB storage space
 - 1MB memory capacity
 - ...etc
- PaaS consumers can require units on their demand
- Consumers may not be aware of whether provided resource is dedicate or shared



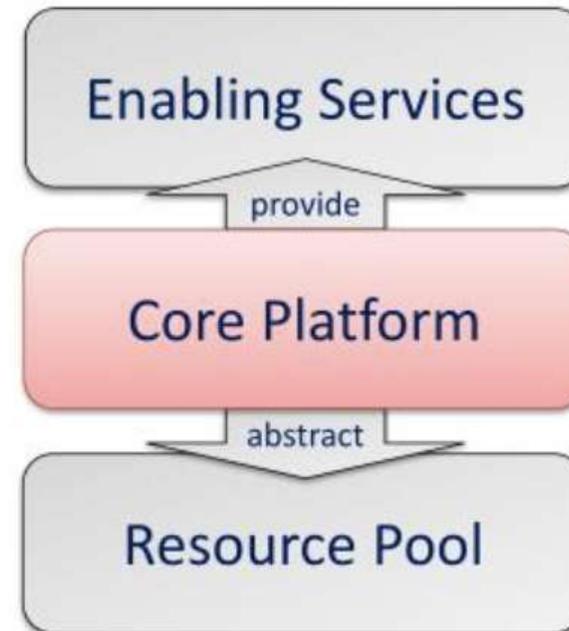


Core Platform



To provide a reliable environment for running applications and services

- Core Platform provides basic functionalities of a PaaS environment
- Act as a bridge between consumer and hardware





Enabling Services



- Enabling Services are the main focus of consumers
- Consumers can make use of these sustaining services to develop their applications
 - Programming IDE
 - Integrate the full functionalities supported from the runtime environment
 - Provide some development tools, such as profiler, debugger and testing environment
 - System Control Interfaces
 - Make the decision according to some principles and requirements
 - Describe the flow of installation and configuration of resources



Assessment



Analyse the requirements of consumer with respect to IaaS

- Large-scale resource abstraction and management
- Requirement of large-scale resources on demand
- Running and hosting environment
- Automatic and autonomous mechanism
- Distribution and management of jobs
- Access control and authentication



Thank You