PAAS

(PLATFORM AS A SERVICE) IN CLOUD COMPUTING

Submitted by

Mebina M S

S5 MCA

**PLATFORM-AS-A-SERVICE (PAAS)**

Platform-as-a-Service (PaaS) is a set of software and development tools hosted on the provider's servers. Google Apps is one of the most famous Platform-as-a-Service providers. This is the idea that someone can provide the hardware (as in IaaS) plus a certain amount of application software - such as integration into a common set of programming functions or databases as a foundation upon which you can build your application. Platform as a Service (PaaS) is an application development and deployment platform delivered as a service to developers over the Web.

“Cloud computing” has dramatically changed how business applications are built and run. At its core, cloud computing eliminates the costs and complexity of evaluating, buying, configuring, and managing all the hardware and software needed for enterprise applications. Instead, these applications are delivered as a service over the Internet. Cloud computing has evolved to include platforms for building and running custom applications, a concept known as ―platform as a service‖ (or PaaS). PaaS applications are also referred to as on-demand, Web-based, or software as a service (or SaaS) solutions. PaaS (Platform-as-a-Service) is a business model in the cloud computing era, which provide a server platform or development environment for developers. Compared with the SaaS (Software-as-Service) to end-user, PaaS is more flexibility. Google App engine is a typical PaaS platform, which allows developers to write and run their own applications on the platform. It also helps developers store data and manage t he server.

**What is paas……?**

Platform as a service or Application platform as a service or platform base service is a category of cloud computing services that provides a platform allowing customers to develop ,run,and manage applications without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.

**SALIENT FEATURES**

* Known also as PaaS (Platform-as-a Service)
* Empowers developers to deploy, deliver and manage their applications. They can build applications, upload (deploy) the same into the cloud platform and simply run and test them
* Developers can also leverage additional benefits like authentication and data access provided by the platform
* This cloud takes away the concept of servers, while providing an application centric environment
* While creating this kind of cloud computing platform, a vendor ―builds a cloud platform first and then develops applications that run on it‖ (OR) ―develops a host able application and then plugs it into the cloud‖. But considering the advantages and disadvantages, the latter would be the better approach

**PaaS properties**

* Gives the programmer a solution stack
  + Web server, database engine, scripting language
* Simple deployment, no worries about servers, storage, network, scaling, updates, …
* Guarantees multitenancy for better security
* Users isolated by virtualization or OS means
* Accounting and billing of used resources
  + Different at every vendor
* Development tools

**PAAS Types**

* Instance PaaS
  + Depends on IaaS layer for multitenancy
    - Better security and performance guarantees
* Framework PaaS
  + Uses OS capabilities for multitenancy
    - Better resource utilization and accounting granularity
  + Requires specific frameworks to be used
* Metadata PaaS
  + Client configures his service through metadata

ADVANTAGES

* Innovate Faster

#### Focus Resources

#### Save Money

#### Get the Best Support

#### Strengthen Security

**DISADVANTAGES**

* No Control over the VM or processing of data, this is a big security risk as you don’t know what’s happening with your data.
* Possibly no control over platform depending on Cloud provider.
* Platform is most likely a shared platform, for example there could be other customers running different websites on the same IIS platform.
* Management task can become time consuming and tedious as you are responsible for updates and upgrades of application.
* Not as cost effective as SaaS and not as much control over VM as IaaS.

**CONCLUSION**

Most of the existing PaaS solutions target only public cloud, which results in many enterprises not moving to PaaS. PaaS applications are referred to as on-demand, Web-based, or software as a service (or SaaS) solutions. PaaS (Platform-as-a-Service) is a business model in the cloud computing era, which provide a server platform or development environment for developers.