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CLOUD AS A SERVICE

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ABSTRACT

The lack of interoperability raised a few issues that have been tackled with open standards and integration frameworks due to the latest trends on cloud computing. However, the development of web applications adds a few more issues when accessing, managing, combining and orchestrating cloud resources in the application's logic. This paper proposes extensible platform architecture for portable cloud service integration. It was designed to satisfy requirements and usage patterns of web application and it implements access control policies and mechanisms for sharing and delegation of resources. The paper explains how the platform can be implemented over existent interoperability frameworks.

I. DEFINITION

Cloud computing is a kind of Internet-based computing, where shared resources, data and information are provided to computers and other devices on-demand known as on-demand computing. It is a model for enabling global, on-demand access to a shared pool of configurable computing resources(e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal effort.It also focuses on maximizing the effectiveness of the shared resources. Cloud resources are usually not only shared by multiple users but are also dynamically reallocated per demand. With cloud computing, multiple users can access a single server to retrieve and update their data without purchasing licenses for different applications.

II.SERVICE MODELS

There are three basic kinds of cloud service models. Each share similarities but have their own distinct differences as well. These service models are Infrastructure-as-a-Service, Software-as-a-Service and Platform-as-a-Service.

III. INFRASTRUCTURE-AS-A-SERVICE (IAAS)

Infrastructure-as-a-Service is the first layer and foundation of cloud computing. In this service model, you manage your applications, data, operating system, middleware and runtime. The service provider manages your virtualization, servers, networking and storage. This allows you to avoid expenditure on hardware and human capital; reduce your ROI risk; and streamline and automate scaling. Some of the biggest names in IaaS include Amazon, Microsoft, VMWare, Rackspace and Red Hat."

An example of a typical need for this model is someone who needs extra data space for processing power on occasion. Infrastructure-as-a-Service allows you to easily scale based on your needs and you only pay for the

resources used. This means that the extra data processing space is available to you whenever you need it, and when you dontyou' are not paying for it, saving you money and providing your business exactly what it needs.

IV. PLATFORM-AS-A-SERVICE (PAAS)

This cloud service model considered to be second layer. You manage your applications and data and the cloud vendor manages everything else. Platform-as-a-Service using benefits include streamlined version deployment and the. ability to change or upgrade and minimize expenses. One popular Platform-as-a-Service is the Google app engine

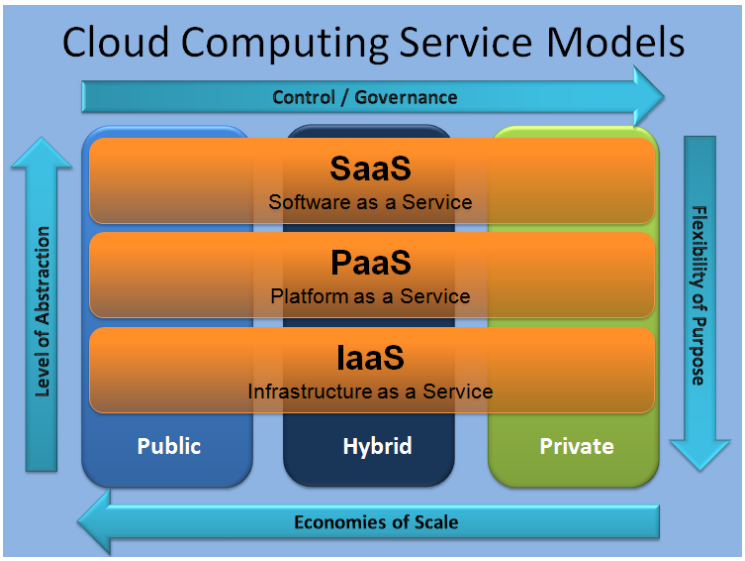
PaaS offers a development environment to application developers. The provider typically develops toolkit and standards for development and channels for distribution and payment. In the PaaS models, cloud providers deliver a computing platform, including operating system, programming-language execution environment, database, and web server. Application developers can develop and run their software solutions on a cloud platform without the cost and complexity of buying and managing the underlying hardware and software layers. Platform as a Service (PaaS) the consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

A business with limited resources in app testing or development might find Platform-as-a-Service beneficial to eliminate costs of upkeep for hardware. In this model, your business benefits because it is not necessary to hire people to maintain these systems.

V. SOFTWARE-AS-A-SERVICE (SAAS)

This is the final layer of the cloud services model. This allows to run programs in the cloud where all portions are managed by the cloud vendor. Your users will have assured compatibility and easier collaboration because all will be using the same software. As consumers we interact with Software-as-a-Service based applications everyday without even realizing it. Examples of this are online banking and email such as Gmail and Hotmail.

The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud physical infrastructure but has control over operating systems, storage, deployed applications, and possibly limited control of select networking components



VI. CONCLUSION

"Cloud" computing builds on decades of research in virtualization, distributed computing, utility computing, and, more recently, networking, web and software services. It implies a service-oriented architecture, reduced information technology overhead for the end-user, great flexibility, reduced total cost of ownership, ondemand services and many other things. This paper discusses the concept of "cloud" computing, and service models, how and where we use these services.

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