

Introduction to Cloud Computing

by



Cloud computing, as the name suggests, is the delivery of computing as a service over the internet. In cloud computing environment resources, software, and information are provided to computers and other devices as a utility. The US National Institute of Standards and Technology (NIST), lists the classical delivery models of cloud computing as:

- Software-as-a-Service (SaaS)
- Platform-as-a-Service (PaaS)
- Infrastructure-as-a-Service (IaaS)

And lists various cloud deployment models as:

- Private
- Public
- Hybrid
- Community

Software as a Service (SaaS)

Out of the three delivery models of cloud computing, the first model is Software-as-a-Service or simply SaaS. SaaS is quite simple to maintain and operate because it depends on a single application. The simplicity in provisioning, maintaining, and the ease of use further translates into monetary savings allowing consumers of the service to avoid high fixed costs associated with buying and maintaining such computing resources.

Platform as a Service (PaaS)

The second delivery model of cloud computing is known as Platform-as-a-Service or simply PaaS. PaaS is used to gain independence from buying databases, servers, networks, and a host of development tools to develop applications. Since vendors offer different types of PaaS platforms, you can avoid those investments and focus on just developing applications.

Infrastructure as a Service (IaaS)

The third and the final delivery model of cloud computing is Infrastructure-as-a-Service or simply IaaS. IaaS is a delivery model in which an organization outsources the equipment that is used to support operations. The equipment may include storage, hardware, servers and networking components. The service provider is considered as the owner of the equipment and is then responsible for housing, running and maintaining it.

Public, private and hybrid clouds are three deployment models used in cloud computing. Essentially, in public cloud model, the computing infrastructure is hosted by the cloud vendor at the vendor's premises. The customer has no visibility and control over where the computing infrastructure is hosted.

In a Private cloud model, the computing infrastructure is dedicated to a particular organization and not shared with other organizations.

The usage of both private and public clouds together is called hybrid cloud model.

The community cloud model involves sharing of computing infrastructure in between organizations of a same community.

There has been a lot of development going on in the cloud computing world thanks to the service offerings such as Amazon Web Services or AWS. AWS provides businesses with a reliable, easy-to-scale, low-cost "in the cloud" computing platform. Companies of all sizes, from all around the globe use AWS to build websites, store data, and manage business processes etc. With the availability of such services the future of cloud computing looks more promising than ever before.

Cloud computing is heavily favored by technology driven startups as it significantly lowers barriers to entry for entrepreneurs. The growth in cloud computing services, especially SaaS, may have recently slowed a little bit due to recession, but is expected to come to robust levels as the economy improves, and businesses look to optimize their operations. For example, Gartner in a September 20th press

release announced that it expects the penetration of cloud and email collaboration services (CECS) to stand at 10 percent by the end of 2014 (<http://www.gartner.com/it/page.jsp?id=1796914>), which means billions of dollars in new market opportunity for firms willing to take the risk now.

Data Dynamics has been at the forefront of cloud computing, and has been leading the way in developing applications that efficiently rely on now ubiquitous cloud services such as Amazon S3, Rackspace, Paypal, Twillio, Encoding.com, etc.

For more information, contact:

info@datadynamics-inc.com