

# Amazon AWS and Windows Azure Comparison based on Cloud Services and Tools

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**Abstract :** Cloud computing are a unit usually printed as a result of the on-demand delivery of data storage, applications, and completely different IT resources through a cloud services platform via the net with the usage of pay-as-you-go analysis. With cloud computing, we've an inclination to don't got to produce large direct investments in hardware and pay lots of some time on the work of managing that hardware. While there are many preferences of adopting the infrastructure, platforms & services offered by a Cloud Service provider, the connotation of these would rely upon the character & size of associate enterprise. There are many public cloud providers like Amazon AWS, Google App Engine, Windows Azure, Force.com, Racks pace and GoGrid. This paper describes the approaches of choosing a cloud provider, and further the Amazon AWS and Windows Azure have been compared on the basics of cloud service and tools.

**Keywords:** *Cloud Computing, Amazon AWS, Windows Azure.*

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## 1. Introduction

*Cloud computing* has become one of the most discussed IT paradigms of recent years. It builds on many of the advances in the IT industry over the past decade and presents significant opportunities for organizations to shorten time to market and reduce costs. With cloud computing, organizations can consume shared computing and storage resources rather than building, operating, and improving infrastructure on their own. The speed of change in markets creates significant pressure on the enterprise IT infrastructure to adapt and deliver. Cloud computing provides fresh solutions to address these changes. As defined by Gartner, "Cloud computing is a style of computing where scalable and elastic IT-enabled capabilities are delivered as a service to external customers using Internet technologies."

These capabilities include compute power, storage, databases, messaging, and other building block services that run business applications. When coupled with a utility-style pricing and business model, cloud computing promises to deliver an enterprise-grade IT infrastructure in a reliable, timely, and cost-effective manner.

## 2. Cloud Service Providers

Cloud service providers (CSP) are companies that offers network services, infrastructure, or business applications in the cloud. The cloud services are hosted in a data center than can be accessed by companies or individuals using network connectivity. The various public cloud service providers are:

- **Amazon AWS**

AWS launched within 2006 beyond the inner infrastructure that Amazon.com shaped to take care of its o line retail operations. AWS was the only advance organizations to announce a pay-as-you-go planet computing mannequin that provide customers to compute, storage or throughput needed. It offers features beside dozens of information centers range across availability zones (AZs) within regions throughout the world. More than 100 services comprise the Amazon Web Services portfolio, such as those because compute, databases, infrastructure management, software development or security.

- **Google App Engine**

A internet framework and computing platform for the web hosting internet capabilities among Google-managed information centers. Applications are sandboxed yet run across more than one servers. App Engine provides automatic scaling because internet applications—as the quantity over requests increases because an application, App Engine robotically allocates more resources because of the web utility according to cope with the additional demand. It was first released as much a preview model of April 2008 then got the preview in September 2011.

- **Windows Azure (formerly Windows Azure)**

It is a computing service manufactured through Microsoft for the building, testing, deploying, yet managing features or functions via a world network concerning Microsoft-managed data centers. It affords

software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS) then helps in specific programming languages, tools and frameworks, inclusive of both Microsoft-specific then third-party software program or systems. Azure was announced within October 2008 and launched on February 1, 2010 namely "Windows Azure" and then renamed "Microsoft Azure" over March 25, 2014.

• **Force.com**

Force.com is a Platform as a Service (PaaS) product designed according to simplify the improvement or deployment of cloud-based functions or websites. Developers can gender apps yet web sites via the cloud IDE (integrated development environment) and set up them rapidly in imitation of Force.com's multi-tenant servers.

• **Rackspace**

It is a set of cloud computing products and functions billed of a assistance computing groundwork beyond the US-based company Rackspace. Offerings include web software internet hosting or board as much a situation , Cloud Storage , digital non-public server , balancers, databases, backup, then monitoring.

• **GoGrid**

GoGrid is also a cloud service, internet hosting Linux yet Windows digital machines managed through a multi-server controlpanel.

**3. Approaches of choosing a cloud service provider**

• **Flexible**

CSP enables organizations to use the programming models, operating systems, databases, and architectures with which they are already familiar. In addition, this flexibility helps organizations mix and match architectures in order to serve their diverse business needs.

• **Cost-effective**

With CSP, organizations pay only for what they use, without up-front or long-term commitments.

• **Scalable and elastic**

Organizations can quickly add and subtract CSP resources to their applications in order to meet customer demand and manage costs.

• **Secure**

In order to provide end-to-end security and end-to-end privacy, CSP builds services in accordance with security best practices, provides the appropriate security features in those services, and documents how to use those features.

• **Experienced**

When using CSP, organizations can leverage more than fifteen years of experience delivering large-scale, global infrastructure in a reliable, secure fashion.

**4. Difference between Amazon AWS and Windows Azure**

The difference between Amazon AWS and Windows Azure is described in table 1.

Table 1. Comparison between Amazon AWS and Windows Azure

Amazon AWS	Windows Azure
Amazon CloudWatch API Tools Amazon CloudWatch API Tools	Windows Azure Plat form Training Kit
Elastic Load Balancing AP I Tools AWS Toolkit for Eclipse	Windows Azure Software Development Kit
Amazon EC2 API Tools Amazon EC2 AMI Tools	Microsoft Visual Studio 2008 Service Pack 1
JavaScript Scratchpad for	Windows Azure plat form AppFabric SDK V1.0
Firefox Organizer for Amazon S3 and Amazon CloudFront (S3Fox)	Windows 7 Training Kit For Developers
Mobile SDK (Android, iOS)	Mobile SDK (Windows Phone 8 Android, iOS)
JavaScript Scratchpad for Amazon FWS Out bound JavaScript Scratchpad for Amazon FWS Inbound	Service Bus EAI and EDI Labs SDK

**5. Conclusion**

There are many factors for comparing the Cloud Service Providers like Service Level Agreements availability, Support for human-only tasks, Integrated DB supported and LanguagesSupported. In this paper we have compared both the CSPs as per the cloud service and tools. The comparison table has been compiled based on latest information available on the websites of cloud providers. The contents are subject to change with time, as and when the cloud providers come up with new innovations and features.

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