AMAZON WEB SERVICES

Amazon Web Services (AWS) is a collection of [remote computing](http://en.wikipedia.org/wiki/Remote_computer) services (also called [web services](http://en.wikipedia.org/wiki/Web_service)) that together make up a [cloud computing](http://en.wikipedia.org/wiki/Cloud_computing) platform, offered over the Internet by [Amazon.com](http://en.wikipedia.org/wiki/Amazon.com). The service are intended to providing a large computing capacity (potentially many servers) much faster and cheaper than building a physical server farm.

Launched in 2006, Amazon Web Services provide online services for other web sites or client-side applications.  Most of these services are not exposed directly to end users, but instead offer functionality that other developers can use in their applications. Amazon Web Services’ offerings can be accessed over [HTTP](http://en.wikipedia.org/wiki/HTTP), using [REST](http://en.wikipedia.org/wiki/Representational_State_Transfer) and [SOAP](http://en.wikipedia.org/wiki/SOAP_(protocol)) protocols. All services are billed based on usage, but how usage is measured for billing varies from service to service.

AWS is located in 10 geographical "regions": ***US East (***[***Northern Virginia***](http://en.wikipedia.org/wiki/Northern_Virginia)***)***, where the majority of AWS servers are based, ***US West (***[***northern California***](http://en.wikipedia.org/wiki/Northern_California)***)***, ***US West (***[***Oregon***](http://en.wikipedia.org/wiki/Oregon)***)***, ***Brazil (***[***São Paulo***](http://en.wikipedia.org/wiki/S%C3%A3o_Paulo)***), Europe (***[***Ireland***](http://en.wikipedia.org/wiki/Ireland)***), South Asia (***[***Singapore***](http://en.wikipedia.org/wiki/Singapore)***), East Asia (***[***Tokyo***](http://en.wikipedia.org/wiki/Tokyo)***), China (***[***Beijing***](http://en.wikipedia.org/wiki/Beijing)***) and Australia (***[***Sydney***](http://en.wikipedia.org/wiki/Sydney)***)***. There is also a "***GovCloud***", based in the [Northwestern United States](http://en.wikipedia.org/wiki/Northwestern_United_States), provided for U.S. government customers, complementing existing government agencies already using the US East Region. Each Region is wholly contained within a single country and all of its data and services stay within the designated Region.

Each Region has multiple "Availability Zones", which are distinct data centers providing AWS services. Availability Zones are isolated from each other to prevent outages from spreading between Zones. Several services operate across Availability Zones (e.g., S3, DynamoDB) while others can be configured to replicate across Zones to spread demand and avoid downtime from failures.

***List of products offered by Amazon web services:***

***Compute***

* [**Amazon Elastic Compute Cloud**](http://en.wikipedia.org/wiki/Amazon_Elastic_Compute_Cloud)**(EC2)**provides scalable virtual private servers using [Xen](http://en.wikipedia.org/wiki/Xen" \o "Xen).
* [***Amazon Elastic MapReduce***](http://en.wikipedia.org/wiki/Amazon_Elastic_MapReduce)***(EMR)*** allows businesses, researchers, data analysts, and developers to easily and cheaply process vast amounts of data. It uses a hosted [Hadoop](http://en.wikipedia.org/wiki/Hadoop) framework running on the web-scale infrastructure of [EC2](http://en.wikipedia.org/wiki/Amazon_Elastic_Compute_Cloud) and [Amazon S3](http://en.wikipedia.org/wiki/Amazon_Simple_Storage_Service).

***Networking***

* [***Amazon Route 53***](http://en.wikipedia.org/wiki/Amazon_Route_53) provides a highly available and scalable Domain Name System (DNS) web service.
* [***Amazon Virtual Private Cloud***](http://en.wikipedia.org/wiki/Amazon_Virtual_Private_Cloud)***(VPC)*** creates a logically isolated set of Amazon EC2 instances which can be connected to an existing network using a [VPN](http://en.wikipedia.org/wiki/Virtual_Private_Network) connection.

AWS Direct Connect provides dedicated network connections into AWS data centers, providing faster and cheaper data throughput.

***Content delivery***

* [***Amazon CloudFront***](http://en.wikipedia.org/wiki/Amazon_CloudFront), a [content delivery network](http://en.wikipedia.org/wiki/Content_delivery_network) (CDN) for distributing objects to so-called "edge locations" near the requester.

***Storage and content delivery***

* [***Amazon Simple Storage Service***](http://en.wikipedia.org/wiki/Amazon_Simple_Storage_Service)***(S3)*** provides Web Service based storage.
* [***Amazon Glacier***](http://en.wikipedia.org/wiki/Amazon_Glacier) provides a low-cost, long-term storage option (compared to S3). High redundancy and availability, but low-frequent access times. Ideal for archiving data.
* ***AWS Storage Gateway***, an iSCSI block storage virtual appliance with cloud-based backup.
* [***Amazon Elastic Block Store***](http://en.wikipedia.org/wiki/Amazon_Elastic_Block_Store)***(EBS)*** provides persistent block-level storage volumes for EC2.
* ***AWS Import/Export***, accelerates moving large amounts of data into and out of AWS using portable storage devices for transport.

***Database***

* [***Amazon DynamoDB***](http://en.wikipedia.org/wiki/Amazon_DynamoDB)provides a scalable, low-latency [NoSQL](http://en.wikipedia.org/wiki/NoSQL" \o "NoSQL) online Database Service backed by [SSDs](http://en.wikipedia.org/wiki/Solid-state_drive).
* ***Amazon ElastiCache*** provides in-memory caching for web applications. This is Amazon's implementation of [Memcached](http://en.wikipedia.org/wiki/Memcached" \o "Memcached) and [Redis](http://en.wikipedia.org/wiki/Redis" \o "Redis).
* [***Amazon Relational Database Service***](http://en.wikipedia.org/wiki/Amazon_Relational_Database_Service)***(RDS)*** provides a scalable [database](http://en.wikipedia.org/wiki/Database) server with [MySQL](http://en.wikipedia.org/wiki/MySQL" \o "MySQL), [Informix](http://en.wikipedia.org/wiki/Informix), [Oracle](http://en.wikipedia.org/wiki/Oracle_(database)), [SQL Server](http://en.wikipedia.org/wiki/Microsoft_SQL_Server), and [PostgreSQL](http://en.wikipedia.org/wiki/PostgreSQL" \o "PostgreSQL) support.
* [***Amazon Redshift***](http://en.wikipedia.org/wiki/Amazon_Redshift)provides petabyte-scale data warehousing with column-based storage and multi-node compute.
* [***Amazon SimpleDB***](http://en.wikipedia.org/wiki/Amazon_SimpleDB) allows developers to run queries on structured data. It operates in concert with EC2 and S3 to provide "the core functionality of a database".
* ***AWS*** ***Data Pipeline*** provides reliable service for data transfer between different AWS compute and storage services (e.g., Amazon S3, Amazon RDS, Amazon DynamoDB, Amazon EMR). In other words this service is simply a data-driven workload management system, which provides a simple management API for managing and monitoring of data-driven workloads in cloud applications.
* ***Amazon Kinesis*** streams data in real time with the ability to process thousands of data streams on a per-second basis. The service, designed for real-time apps, allows developers to pull any amount of data, from any number of sources, scaling up or down as needed.

***Deployment***

* ***Amazon CloudFormation*** provides a file-based interface for provisioning other AWS resources.
* [***AWS Elastic Beanstalk***](http://en.wikipedia.org/wiki/AWS_Elastic_Beanstalk)provides quick deployment and management of applications in the cloud.
* ***AWS OpsWorks*** provides configuration of EC2 services using [Chef](http://en.wikipedia.org/wiki/Chef_(software)).

***Management***

* [***Amazon Identity and Access Management***](http://en.wikipedia.org/w/index.php?title=Amazon_Identity_and_Access_Management&action=edit&redlink=1) (IAM) is an implicit service, the authentication infrastructure used to authenticate access to the various services.
* [***Amazon CloudWatch***](http://en.wikipedia.org/wiki/Amazon_CloudWatch)***,*** provides monitoring for AWS cloud resources and applications, starting with EC2.
* ***AWS Management Console (AWS Console)***, A web-based point and click interface to manage and monitor the Amazon infrastructure suite including (but not limited to) [EC2](http://en.wikipedia.org/wiki/Amazon_Elastic_Compute_Cloud),[EBS](http://en.wikipedia.org/wiki/Amazon_Elastic_Block_Store), [S3](http://en.wikipedia.org/wiki/Amazon_S3), [SQS](http://en.wikipedia.org/wiki/Amazon_Simple_Queue_Service), [Amazon Elastic MapReduce](http://en.wikipedia.org/wiki/Amazon_Elastic_MapReduce), and [Amazon CloudFront](http://en.wikipedia.org/wiki/Amazon_CloudFront). Amazon also makes available a mobile application for [Android](http://en.wikipedia.org/wiki/Android_(operating_system)) which has support for some of the management features from the console.
* Application services
* ***Amazon CloudSearch*** provides basic full-text search and indexing of textual content.
* ***Amazon DevPay***, currently in limited [beta version](http://en.wikipedia.org/wiki/Beta_version), is a billing and account management system for applications that developers have built atop Amazon Web Services.
* ***Amazon Elastic Transcoder (ETS)*** provides video transcoding of S3 hosted videos, marketed primarily as a way to convert source files into mobile-ready versions.
* [***Amazon Flexible Payments Service***](http://en.wikipedia.org/wiki/Amazon_Flexible_Payments_Service)***(FPS)*** provides an interface for [micropayments](http://en.wikipedia.org/wiki/Micropayments).
* [***Amazon Simple Email Service***](http://en.wikipedia.org/wiki/Amazon_Simple_Email_Service)***(SES)*** provides bulk and transactional email sending.
* [***Amazon Simple Queue Service***](http://en.wikipedia.org/wiki/Amazon_Simple_Queue_Service)***(SQS)*** provides a hosted message queue for web applications.
* ***Amazon Simple Notification Service (SNS)*** provides a hosted multi-protocol "[push](http://en.wikipedia.org/wiki/Push_technology)" messaging for applications.
* ***Amazon Simple Workflow (SWF)*** is a workflow service for building scalable, resilient applications.

***Miscellaneous***

* Amazon Fulfillment Web Service provides a programmatic [web service](http://en.wikipedia.org/wiki/Web_service) for sellers to ship items to and from Amazon using Fulfillment by Amazon. This service will no longer be supported by Amazon. All of the functionality of this service is now transferred to Amazon marketplace Web service.
* Amazon Historical Pricing provides access to Amazon's historical sales data from its affiliates. (It appears that this service has been discontinued.)
* [Amazon Mechanical Turk](http://en.wikipedia.org/wiki/Amazon_Mechanical_Turk) (Mturk) manages small units of work distributed among many persons.
* [Amazon Product Advertising API](http://en.wikipedia.org/wiki/Amazon_Product_Advertising_API) formerly known as Amazon Associates Web Service (A2S) and Amazon E-Commerce Service (ECS), provides access to Amazon's product data and electronic commerce functionality.
* Amazon Gift Code On Demand (AGCOD) for Corporate Customers[[23]](http://en.wikipedia.org/wiki/Amazon_Web_Services#cite_note-23) enables companies to distribute Amazon gift cards (gift codes) instantly in any denomination, integrating Amazon's gift-card technology into customer loyalty, employee incentive and payment disbursement platforms.
* AWS Partner Network (APN) provides technology partners and consulting partners with the technical information and sales and marketing support to increase business opportunities through AWS and with businesses using AWS. Launched in April 2012, the APN is made up of Technology Partners including Independent Software Vendors (ISVs), tool providers, platform providers, and others.[[24]](http://en.wikipedia.org/wiki/Amazon_Web_Services#cite_note-24)[[25]](http://en.wikipedia.org/wiki/Amazon_Web_Services#cite_note-25)[[26]](http://en.wikipedia.org/wiki/Amazon_Web_Services#cite_note-26) Consulting Partners include System Integrators (SIs), agencies, consultancies, Managed Service Providers (MSPs), and others. Potential Technology and Consulting Partners must meet technical and non-technical training requirements set by AWS.

References:

<http://en.wikipedia.org/wiki/Amazon_Web_Services>

<http://aws.amazon.com/>