

**Amazon Web Services, Inc. (AWS)** is a subsidiary of [Amazon](#) that provides [on-demand cloud computing platforms](#) and [APIs](#) to individuals, companies, and governments, on a metered, pay-as-you-go basis. Oftentimes, clients will use this in combination with autoscaling (a process that allows a client to use more computing in times of high application usage, and then scale down to reduce costs when there is less traffic). These cloud computing [web services](#) provide various services related to networking, compute, storage, [middleware](#), [IoT](#) and other processing capacity, as well as [software tools](#) via AWS [server farms](#). This frees clients from managing, scaling, and patching hardware and operating systems. One of the foundational services is [Amazon Elastic Compute Cloud \(EC2\)](#), which allows users to have at their disposal a [virtual cluster of computers](#), with extremely high availability, which can be interacted with over the internet via [REST APIs](#), a CLI or the AWS console. AWS's virtual computers emulate most of the attributes of a real computer, including hardware [central processing units \(CPUs\)](#) and [graphics processing units \(GPUs\)](#) for processing; local/[RAM](#) memory; hard-disk/[SSD storage](#); a choice of operating systems; networking; and pre-loaded application software such as [web servers](#), [databases](#), and [customer relationship management \(CRM\)](#).

AWS services are delivered to customers via a network of AWS server farms located throughout the world. Fees are based on a combination of usage (known as a "Pay-as-you-go" model), hardware, operating system, software, or networking features chosen by the subscriber required [availability](#), [redundancy](#), [security](#), and service options. Subscribers can pay for a single virtual AWS computer, a dedicated physical computer, or clusters of either.<sup>[7]</sup> Amazon provides select portions of security for subscribers (e.g. physical security of the data centers) while other aspects of security are the responsibility of the subscriber (e.g. account management, vulnerability scanning, patching). AWS operates from many global geographical regions including seven in North America.<sup>[8]</sup>

Amazon markets AWS to subscribers as a way of obtaining large-scale computing capacity more quickly and cheaply than building an actual physical server farm.<sup>[9]</sup> All services are billed based on usage, but each service measures usage in varying ways. As of 2021 Q4, AWS has 33% market share for cloud infrastructure while the next two competitors [Microsoft Azure](#) and [Google Cloud](#) have 21%, and 10% respectively, according to [Synergy Group](#).<sup>[10][11]</sup>

## Services<sup>[edit]</sup>

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*Main articles:* [Amazon Elastic Compute Cloud](#) and [Amazon S3](#)

As of 2021, AWS comprises over 200<sup>[12]</sup> products and services including [computing](#), [storage](#), [networking](#), [database](#), [analytics](#), [application services](#), [deployment](#), [management](#), [machine learning](#),<sup>[13]</sup> [mobile](#), [developer tools](#), RobOps and tools for the [Internet of Things](#). The most popular include [Amazon Elastic Compute Cloud \(EC2\)](#), [Amazon Simple Storage Service \(Amazon S3\)](#), [Amazon Connect](#), and [AWS Lambda](#) (a [serverless function](#) that can perform arbitrary code written in any language that can be configured to be triggered by hundreds of events, including http calls).<sup>[14]</sup>

Services expose functionality through APIs for clients to use in their applications. These APIs are accessed over [HTTP](#), using the [REST](#) architectural style and [SOAP](#) protocol for older APIs and exclusively [JSON](#) for newer ones. Clients can interact with these APIs in various ways, including from the AWS console (a website), by using SDKs written in various languages (such as Python, Java, and JavaScript), or by making direct REST calls.