

HOSTWAY[®]

A DECADE OF CLOUD



CLOUD COMPUTING: A WORLD-CHANGING INNOVATION

When one considers technology having a profound impact on humanity, a number of major innovations such as electricity, the gas engine, airplanes, automobiles, microprocessors, personal computers, the internet, mobile devices and more may come to mind.

The cloud should also be included in this list as it has been a groundbreaker over the last 10 years. Cloud computing has enabled companies of all sizes to dramatically improve efficiency, time to market and return on investment. It has given small, nimble start-ups the opportunity to compete with large enterprises and has helped accelerate the rate of innovation across organizations of all sizes. The cloud has enabled entirely new business categories to form and has helped rejuvenate declining industries. The cloud truly is one of the most disruptive and transformative innovations in recent history.

BUT HOW DID THE CLOUD AS WE KNOW IT COME TO BE AND WHERE IS IT GOING?

To help answer these questions, we'll review a number of iterations the cloud has gone through over the last decade and provide some insight into where it's headed in the next few years.



CLOUD 0.5: IN THE BEGINNING, THERE WAS VIRTUALIZATION

EARLY TO MID-2000s

The backbone of the cloud is server virtualization. This technology began to emerge as a popular player in the early to mid-2000s, with the original value proposition geared toward data center consolidation projects. Intel and AMD were starting to release multi-core processors that were so advanced that the quantity of available CPU cycles was growing faster than what applications could consume. This led to stranded server capacity and wasted data center space. Server virtualization made it possible to run multiple operating systems and multiple applications on fewer servers. This allowed companies to free up precious data center space, creating cost savings for their continuously shrinking IT budgets.

As server virtualization started to become more widespread, companies started to see how software could improve the agility and economics of an IT shop. With software, companies could spin up workloads in a matter of minutes, instead of the days it had taken in the past. This resulted in higher productivity, cost reduction due to fewer people performing labor intensive tasks, and innovation at a faster pace.

At this same time, a number of service providers were starting to emerge that could provide Infrastructure as a Service (IaaS) powered by self-service user and programming interfaces. In late 2007 / early 2008 the term cloud computing started to create a buzz in the industry and these self-service, software-driven IT providers started to be called cloud service providers, or CSP's.

CLOUD 1.0: RAPID EXPANSION

The buzz of cloud computing spread like wildfire. Virtually every company that offered hosting, colocation services, or some form of service-based IT started marketing their products as “cloud” offerings. For instance, shared hosting or website hosting, which had been around for a little over 10 years, started being called “cloud hosting.” No matter if the service had been defunct before, all it took was slapping a “cloud” product name on it, and it once again began to sell like hotcakes.

As a result, the market quickly became flooded with clouds of all different forms, sizes and types, so much so that customers started to question what the cloud actually was. There was no cloud standard, no single definition and no rule of thumb to help guide customers toward an understanding of the technology. It wasn't until Gartner published the IaaS Magic Quadrant in 2010 that definitions for the different types of cloud were firmly established.



In addition to the Magic Quadrant, standards bodies started to form around cloud computing. Two such examples are the Open Data Center Alliance (ODCA) and the Cloud Security Alliance (CSA). The ODCA was a unique consortium of leading global IT organizations dedicated to accelerating adoption of interoperable cloud-based solutions and services, whereas the CSA dedicated itself to defining and raising awareness of best practices for maintaining secure cloud environments.

Shortly after Gartner's IaaS Magic Quadrant was published, new types of clouds started to emerge. Software as a Service (SaaS) and Platform as a Service (PaaS) were both introduced during this time. The functionality of these offerings was enabled by IaaS, and with them, the means by which organizations consumed and interacted with software applications began to change. Companies no longer had to install and consistently update executable versions of software on the local desktop. All they had to do was interact with the latest and greatest version of the software through a web browser. Developing new websites and applications became even easier.

CLOUD 2.0: A MATURING MARKETPLACE

In 2012, hyperscale providers began to emerge in the market as dominant players. Amazon Web Services was estimated to break the \$1 billion revenue mark in 2012, according to CRN, putting it at the top of the pack. Amazon focused on empowering developers and, in the process, woke up an entire community of innovators, inventors and startups that were excited to begin participating in a digital revolution.

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Over the next few years, more cloud providers entered the market, aiming to tackle the giant that Amazon had become. For instance, VMware, which owned most of the virtualization market, launched its own public cloud offering. Unfortunately for VMware, these efforts quickly proved that it's not enough to house the best virtualization software in the industry. In order to be competitive in the cloud marketplace, it's also necessary to out-innovate your competition, releasing new offerings more quickly than your competitors. By 2013 and 2014, most of the up-and-coming cloud providers were being seriously outpaced by Amazon due to the latter's ability to innovate at a much faster pace.

Enter Microsoft. The company was quietly refactoring its business to shift from a traditional desktop software provider to a subscription-based cloud services provider model. With the launch of Office 365 in 2011, Microsoft began to grow, and by 2014 it had completely reinvented its core platform to include IaaS, PaaS and SaaS offerings. Today, Microsoft is now innovating at the same or greater pace as Amazon.

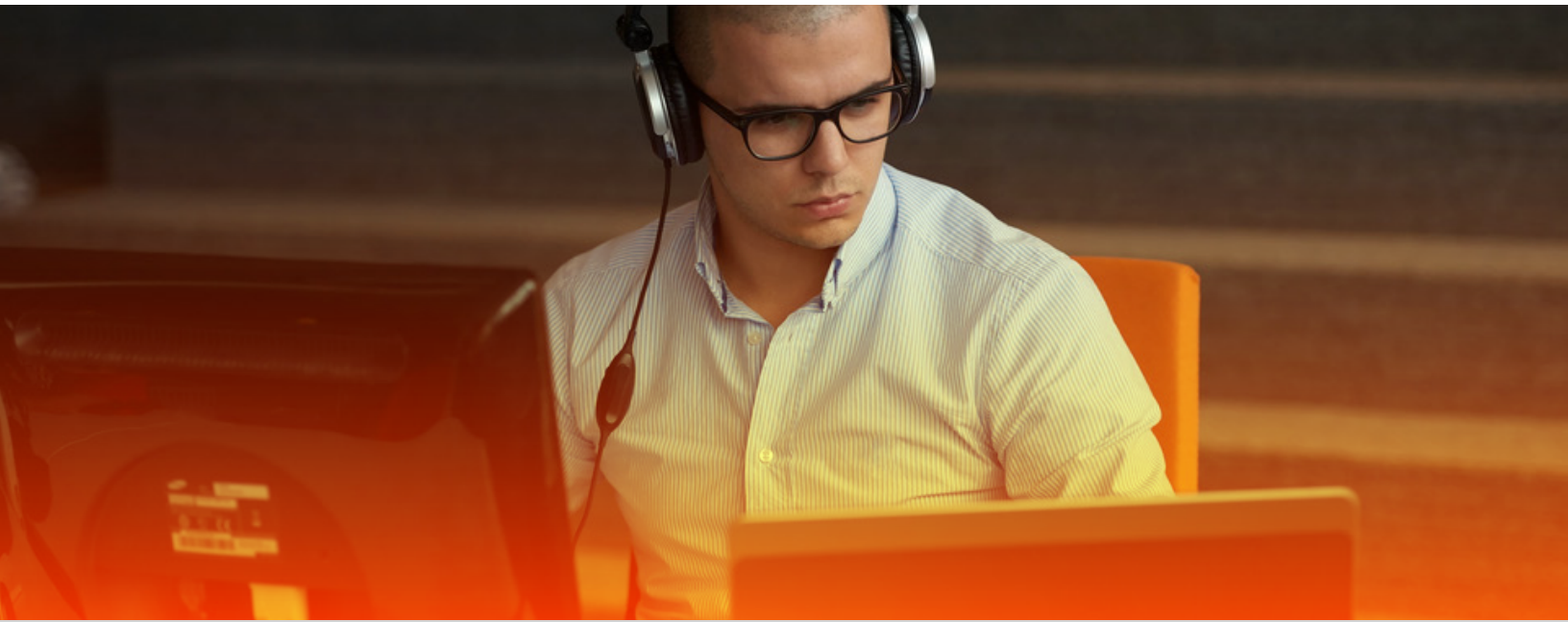


CLOUD 3.0: WHAT DOES THE FUTURE HOLD?

The cloud industry has evolved from a rather small number of niche providers delivering offerings via large-scale infrastructure build-outs within their own data centers or in rented space to three dominant players today: Amazon, Microsoft and Google. These three companies are now building hyperscale data centers around the world, deploying infrastructure at breakneck speeds: thousands of servers a day and petabytes of storage per hour.

Some of the niche cloud providers have made the strategic decision to partner with the hyperscale providers instead of trying to compete – we will increasingly see these providers offering complementary products and services not available through the hyperscale provider.

For instance, Hostway offers onboarding, configuration, deployment and optimization assistance to companies looking to deploy complicated public cloud environments for the first time. In addition, Hostway's nearly two decades of experience in the managed hosting space allows it to offer customer-centric support practices on top of Azure-based deployments, making the ongoing use and adoption of these cloud platforms much more sustainable.



Hostway also helps companies manage hybrid cloud deployments – something that is typically outside of the core competency of larger cloud providers. Hostway connects public and private Azure-based clouds and wraps the entire solution with proven Hostway managed support – allowing customers the flexibility to run their app in the best-fit environment.

There it is: Nearly four generations of cloud computing in less than 10 years. The next 10 years will be exciting to watch - hopefully the cloud will continue to drive more innovation, more transformation and more cost savings, along with building a more connected world.

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