

Nominee: Google

Nomination title: Google Compute Engine

Developers want to get their apps in the hands of users quickly, without having to worry about infrastructure. Furthermore, once they hit it big, they'll need to scale with ease. Google Compute Engine allows developers to build on the same infrastructure that allows Google to return billions of search results in milliseconds, serve 6 billion hours of YouTube video per month and provide storage for 425 million Gmail users.

Because Google understands that it is impossible to predict how much storage you'll need or how quickly you'll need to scale, Google Compute Engine is designed for developers to pay for what they use without complex up-front planning and commitment or dealing with complex reservation-based pricing.. It's about creating a flexible and fluid infrastructure that developers don't have to lose sleep over, while having complete control over the Virtual Machine building blocks. Freed from the complexities of planning, operating and maintaining physical infrastructure and data centers, developers can focus on building the next big thing.

Google Compute Engine empowers developers with the following unique features:

Compute Engine Linux VMs are consistently performant, scalable, highly secure and reliable. Supported distros include Debian and CentOS. You can choose from micro-VMs at about a penny an hour to large instances with up to 16 cores and 104 gigs of memory.

Create large compute clusters that benefit from strong and consistent cross-machine bandwidth. - Connect to machines in other data centers and to other Google services using Google's private global fiber network. Advanced Routing and global networking give you control and flexibility in the network layer.

Google bills in minute-level increments (with a 10-minute minimum charge), so you don't pay for unused computing time. With sustained use discounts, we automatically give you discounted prices for long-running workloads with no complicated planning, sign-up or up-front commitment.

Native load-balancing technology helps you spread incoming network traffic across a pool of instances, so you can achieve maximum performance, throughput and availability at low cost.

Quickly deploy large clusters of virtual machines with intuitive tools including a RESTful API, command-line interface and web-based Console. You can also use tools such as RightScale and Scalr to automatically manage your deployment.

You can spin up 1000+ node clusters in less than five minutes, making scaling a breeze.

MapR used off-the-shelf Compute Engine Virtual Machines to 1.5TB of data in 1 minute (the “minute sort” record) - making Compute Engine the first virtual environment to achieve this distinction.

Google was the first cloud provider to combine live migration technology with data center innovations to implement “transparent migration”, delivering higher reliability for virtual machines without user-impacting maintenance events.

All data written to disk in Compute Engine is encrypted at rest using the AES-128-CBC algorithm. Compute Engine has completed ISO 27001, SSAE-16, SOC 1, SOC 2, and SOC 3 certifications, demonstrating our commitment to information security.

Setting the standard for container based computing in the cloud with a deep partnership with Docker and stewarding the kubernetes project.

As a result, Google Compute Engine has enabled a plethora of customers to scale and innovate in their respective industries. Leading data management platform Ezakus is just one example. Ezakus found their business growth being hampered by a service provider unable to keep pace with their rapidly expanding data requirements. After careful evaluation, they found their solution in Google Compute Engine, a Google Cloud Platform service.

Ezakus works with scores of digital advertisers and publishers. “Our job is to ‘read the minds’ of users,” explains Jean-Michel Gobet, director of marketing. “We analyze the

connection data recorded by the websites of our clients, from third-party cookies or identifiers' phones, which fully respects the anonymity of users. Every day we 'brew' 600 million digital touch points raised by 40 million users and mobile users worldwide."

The company had been successfully managing Hadoop nodes from a provider to handle all of their data. But as requirements grew, so did their problems. "We didn't get enough service or support, and we were obliged to manage all the hardware. It was quite time consuming," says Olivier Gardinetti, chief technology officer. "Hosting and infrastructure management are not the value that Ezakus provides. There was no point for us to buy and manage specific hardware."

"Google Compute Engine was the best platform we tested, from a stability and performance point of view," Gardinetti says. "We were very surprised about the performance. Compute Engine was three or four times better than the next-best cloud provider, in terms of processing speed."

Ezakus transitioned to Compute Engine in December 2013.

Ezakus can now provide more performance and predictions and serve more clients, "because we can more easily deploy all the servers in a very short time," Gardinetti says. "We can also expand our business to the international environment. If I want to deploy hundreds of machines for a customer in the US, it's very easy to do. You just need to choose a template of the VM and in a few seconds you have the servers you want. This is a key element in our capacity to make effective predictions, win more customers and make campaigns more efficient."

Why nominee should win

It allows developers to build on the same infrastructure that allows Google to return billions of search results in milliseconds, serve 6 billion hours of YouTube video per month and provide storage for 425 million Gmail users without the complexities of planning and maintaining physical hardware.

Google was the first to combine live migration technology with data center innovations to implement "transparent maintenance", delivering higher reliability and non-disruptive maintenance.



Encryption at rest and five completed certifications demonstrate Google's commitment to security.

Set the standard for container based computing in the cloud with Docker partnership and stewarding the kubernetes project.