

SPAREROOM USES C3D VMS TO QUICKLY AND RELIABLY HELP ROOMMATES FIND EACH OTHER

Migrating to Google Cloud C3D virtual machines powered by 4th Gen AMD EPYC™ processors enables SpareRoom to provide a better experience for people looking for rooms or roommates.



PARTNER



INDUSTRY

Real Estate

CHALLENGES

Increase the speed and reduce the cost of providing the roommate market with a premiere service through SpareRoom website and apps.

SOLUTION

Progressively migrate SpareRoom workloads to C3D virtual machines based on 4th Gen AMD EPYC™ CPUs.

RESULTS

C3D VMs serve approximately 25% more requests at a 10% reduction in response time than N2 Ice Lake—and at a lower cost. SpareRoom gets the best performance and the best value for its applications, while its customers can expect an even more responsive service.

AMD TECHNOLOGY AT A GLANCE

3rd Gen AMD EPYC Processors
(N2D VMs) (formerly codenamed “Milan”)
4th Gen AMD EPYC Processors
(C3D VMs) (formerly codenamed “Genoa”)

SpareRoom, the leading roommate finder service, thrives on a robust infrastructure tailored to accommodate an active and ever-expanding user base. Initially launched in the UK, the company chose to colocate servers locally. When SpareRoom later expanded to the United States, the top priority was to maintain a fast-loading and responsive website and apps for room seekers.

Reflecting on the decision-making process regarding the tech stack for the expansion, Dimitrios Kechagias, Principal Developer at SpareRoom, explained: “If you want something on the other side of the world and with scalability, a cloud solution seemed like a good fit”.

SpareRoom originally chose Amazon Web Services (AWS) as their cloud provider but eventually switched to Google Cloud because of the noticeably lower cost. When they initially migrated to Google Cloud, SpareRoom tried to emulate their original bare metal VMs using Intel Broadwell and Skylake-powered N1, N2, and C2

VM types. However, by doing this, their costs increased.

SpareRoom had to evaluate their technology stack to control their costs as they scaled internationally, and they needed increased performance to maintain their responsive user experience.

MAKING THE MOVE TO AMD CPU-POWERED VMS

The solution to these soaring costs and declining performance lay in Google Cloud VMs powered by 3rd-generation AMD EPYC processors. SpareRoom began with 3rd Gen EPYC powered N2D and T2D VMs and will eventually transition to C3D VMs powered by 4th Gen AMD EPYC.

Dimitrios began his evaluation of the Google Cloud N2D VMs with AMD processors by building benchmarks based on the code from SpareRoom’s platform.

“The best benchmark is your own software,” he noted.

Dimitrios noticed that Google Cloud N2D VMs with AMD

processors were less expensive and faster than the Intel-based platforms, especially for SpareRoom's use case of serving web pages. The results spoke for themselves, offering the improved cost performance that SpareRoom sought while delivering a fast and responsive user experience. Dimitrios and the SpareRoom platform team moved to implement N2D into their technology stack.

"When our current three-year reservation expires this spring, all our N2 servers will switch to C3D, saving us money and making our service faster at the same time."

*Dimitrios Kechagias
Principal Developer, SpareRoom*

The upgrade quickly delivered significant performance benefits. The new platform served 74% more requests than the Intel N1 with 7% less response time. It also served 40% more requests than the more expensive Intel N2 Cascade Lake at a similar response time. The transition from Intel N1-based VMs to AMD CPU-based N2D VMs required a simple change of Terraform code and the rebuilding of relevant servers.

Such a positive migration experience prompted the SpareRoom team to keep track of the tech developments from AMD. Dimitrios believes the new Google Cloud C3D VMs – powered by AMD 4th Gen EPYC processors – are going to improve SpareRoom's performance even more. He began benchmarking the performance of the

VMs for several months before C3D hit general availability.

SpareRoom is currently benchmarking C3D instances alongside Intel-powered Ice Lake web servers. C3D serves almost 25% more requests than Intel N2 Ice Lake while lowering

the response time by over 10%. Additionally, C3D is 7% less expensive than N2 in reserved price.

With these facts to support them, Dimitrios and his team now have all the confirmation they need to continue the migration of their VM fleet to C3D.

SpareRoom benchmarks C3D

Their findings were compelling. Dimitrios published his compelling benchmarking results for the C3D VMs in a [Dev.to blog post](#). Some of the cost and performance highlights include:

MAXIMUM PERFORMANCE OF

20% - 50%

Faster than the previous world record for the 7zip compression/decompression benchmark

18% - 27%

Faster performance compared to C3 VM



Performance advantages across the board



The best value, as well as the fastest cores



An expectation of quick adoption by cloud customers looking for the combination of best performance and lowest cost for their VM fleets

SpareRoom is making this move to C3D even more effortless by partnering with Google Cloud migration specialists, [DoiT](#). The company is one of AMD and Google Cloud's top partners and was instrumental in setting SpareRoom up with the C3D preview and with getting feedback to and from Google.

"When we want to use a new technology, DoiT can arrange a quick session or several sessions with an engineer to let us familiarize ourselves with the new technology or get us access to the private preview as they did with C3D," noted Dimitrios.

DoiT also provides training and support as SpareRoom tackles practical tasks such as migrating SMTP servers and moving data to [BigQuery](#).

A BETTER FUTURE FOR ROOMMATES

SpareRoom's goal is to provide a better roommate finder service that is snappy and responsive for users while being cost-effective for the company. The transition to Google Cloud C3D VMs powered by 4th Gen AMD EPYC processors has allowed SpareRoom to deliver just that for its customers due to their proactive migration decisions.

Now more than ever, roommates have a lot to look forward to when they choose to move with SpareRoom.

ABOUT SPAREROOM

SpareRoom is the UK's number one roommate site with over 13 million registered users. Founded in the UK in 2004, the company expanded across the US market in 2016 and has so far helped over 2.5 million people find a room or a roommate.

ABOUT AMD

For over 45 years, AMD has driven innovation in high-performance computing, graphics, and visualization technologies – the building blocks for gaming, immersive platforms, and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit www.amd.com/epyc.

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