

EMIRATES NBD ACCELERATES DIGITAL TRANSFORMATION WITH AMD CPUs

CASE STUDY

Emirates NBD achieved a major digital transformation by adopting AMD CPUs for servers and staff laptops, boosting performance, speed, and efficiency



Emirates NBD has been on a journey of digital transformation since 2018. After great results from upgrading its infrastructure to AMD EPYC™ Server CPUs in 2022, Emirates NBD wanted to build on these improvements and extend their benefits to its end users. Once again, AMD CPUs delivered the results the bank needed.

“Emirates NBD is one of the leading banks in the Middle East,” says Ali Rey, Group Head of Technology Platforms, Emirates NBD. “We operate in 13 different countries, from India to Singapore, London, Saudi Arabia, Egypt, even Turkey.” The financial institution’s goal is to maintain its lead through technology. “That means keeping innovation at the forefront of everything we do.”

“There was a huge improvement from moving to new AMD EPYC CPUs.”

Marwan Abdulla, Head of Data Center and Operations, Emirates NBD

“We have a wide variety of applications with different requirements,” adds Khulood Alblooshi, Platform Owner – DevSecOps tooling, Emirates NBD. “Our primary focus is resilience and efficiency of infrastructure.” Emirates NBD wanted to implement a future-conscious, scalable, and reliable solution without relying on proprietary technology.

REDUCING COMPLEXITY AND IMPROVING RELIABILITY

“We’ve always invested heavily in technology, and this is important to position ourselves for continued growth and to best serve our clients,” says Nicholas Grimm, Head of Cloud Compute, Emirates NBD. “This enables us to provide highly available performance services. We have a private cloud infrastructure that hosts more than 350 applications, and we run thousands of containers and VMs. To date, we have built over 2,000 APIs and we process over 300 million API calls per day.”

The bank’s reliability is also fully certified, an important part of how it demonstrates trust to its customers. “The Emirates NBD data center is a Tier 3 Design and Build Infrastructure certified by the Uptime Institute with a Tier Certificate of Constructed Facility (TCCF), and Tier Certificate of Design Document (TCDD),” adds Marwan Abdulla, Head of Data Center and Operations, Emirates NBD. “In addition to that, our data center has been awarded a Green Renewable Energy Certificate, for a total capacity of 12,000MW powered by solar and nuclear power.”

INDUSTRY

Financial services

CHALLENGES

Technical complexity from a mix of vendors; needing to maintain its digital lead; satisfying high resilience and reliability criteria, including achieving zero downtime

SOLUTION

Data center server infrastructure upgraded to AMD EPYC™ Server CPUs, plus new employee laptops equipped with AMD Ryzen™ PRO CPUs

RESULTS

Up to 51% faster server performance than alternatives; transaction times dropped from 1-2 seconds to 0.5-1 second; log processing became near-instantaneous; new laptops were 40% faster

AMD TECHNOLOGY AT A GLANCE

AMD EPYC™ Server CPUs
AMD Ryzen™ PRO CPUs



Emirates NBD advances digital innovation using AMD CPU technology across its platforms.

Satisfying these reliability criteria has created considerable challenges in the Emirates NBD infrastructure. “When we started the transformation in 2018, we had many different combinations of hardware vendors, database and operating systems within our technology stack,” says Grimm. “This introduced technical complexity in terms of scalability, management, and support.”

Keeping ahead of certification and performance requires continual deployment of the latest technology. “The digital banking transformation has been run over the last seven years,” says Rey. The goal of this program was to ensure the bank’s digital leadership and to make services easily accessible to customers around the clock. “We want our customers to see banking as an efficient and simple process, transforming our technology so it’s easy for them to access.”

“The AMD laptops were clearly much faster than the other laptops.”

Ali Rey, Group Head of Technology Platforms,
Emirates NBD

AMD EPYC™ SERVER CPUs DELIVER FASTER TRANSACTIONS

AMD enterprise server solutions continue to be an ideal choice to satisfy Emirates NBD’s infrastructure needs. “Our teams conducted real-world tests of sample workloads,” says Grimm. “We thoroughly tested our database performance, core banking APIs, and memory bandwidth, and how CPUs were accessing the memory. We also did a lot of web-based user testing. The test results were positive, indicating that AMD EPYC™ Server CPUs were more than 42% faster than alternative providers on average, and in some cases up to 51% faster.”

“We are now running all our data centers on AMD EPYC CPUs,” says Abdulla. “These high frequency EPYC processors are energy efficient and contribute to the bank’s wider ESG targets. Few banks operate with the same level of efficiency that we do today.”

Emirates NBD’s key server goal is optimizing transaction reliability. “We have zero downtime, and our goal is always centered on transactions per second,” says Abdulla. “The performance of AMD CPUs is vital when seconds are incredibly important to our business. Most transactions used to take one to two seconds, but with AMD EPYC CPUs, we went down to between half and one second.”

“AMD EPYC CPUs were more than 42% faster than alternative providers on average.”

Nicholas Grimm, Head of Cloud Compute, Emirates NBD

We process terabytes of logs a day. Our nodes process logs in the background, and each one had a backlog of between 100 to 300 jobs. We recently moved those nodes over to new AMD EPYC CPUs and now we don’t see more than five jobs waiting. Our logs are almost instantaneous. Before, you had to wait minutes. There was a huge improvement from moving to new AMD EPYC CPUs.”

“There’s no other company in the market pushing the boundaries of chip design so much.” The bank was one of the first companies in the region to move to AMD processors. “It has been seamless. We’ve seen much better performance. AMD staff have all been super supportive, very friendly, very down-to-earth, and easy to deal with.”



Emirates NBD delivers smoother everyday banking enabled by AMD CPU performance.

EXTENDING THE BENEFITS OF AMD RYZEN™ PRO CPUs TO LAPTOPS

The bank wanted to extend the benefits of AMD technology to its client systems as well as on the back end. “We want our staff to have the latest and greatest systems,” says Rey. “When we tested the different laptops, we were very impressed with AMD processors. They were 40% faster on average and had the GPU included. When it came time to refresh our laptops, it was an easy decision to go with AMD CPUs.”

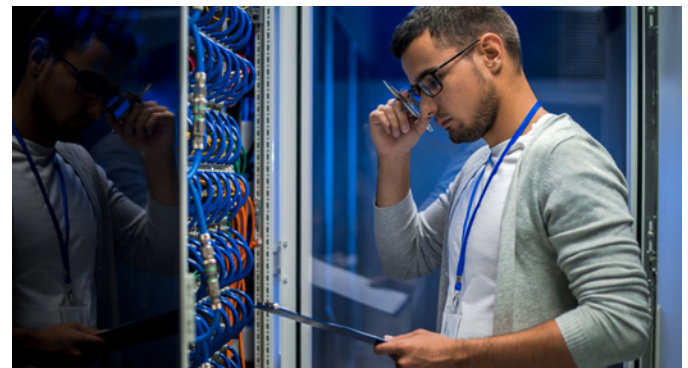
“We wanted to make sure we’re continuously providing our staff with the best devices,” adds Rey. “They’re going to work with them for many hours of the day, and we want to make sure they get the fastest experience. We tested all the different laptops for weight, look, feel, and performance. The AMD laptops were clearly much faster than the other laptops, with a great look and feel. Now all our new laptops have AMD processors.”

“The deployment of the laptops has been seamless,” says Rey. “We haven’t faced any challenges upgrading from our old laptops.” He says that this is the first time end users have actively commended the laptop choice. “It’s been great for us and made life easier.”

“We work with AMD across the board, from our laptops for all our staff across the globe, to our servers that run all the banking applications,” says Rey. “Every banking application we use must run 24/7 with no downtime, and we really trust AMD for that.”

We’re trying out AMD GPUs now and seeing amazing performance with them for our high-end AI needs. We trust AMD and we’re very happy to look at how we can deliver more with the company going forward.”

For Emirates NBD, the move to AMD has delivered clear benefits in performance, infrastructure efficiency and overall value. “We have been able to enjoy the benefit of building better infrastructure densities and utilization with fewer servers,” says Grimm. “Performance continues to impress, and we are excited to push the technology limits of our new generation servers. The decision to go with AMD has yielded excellent returns, and fantastic after-sales support has ensured that any challenges identified are quickly rectified.”



AMD EPYC Server CPUs help Emirates NBD achieve faster transactions and zero downtime.



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ABOUT EMIRATES NBD

Emirates NBD is a leading banking group in the MENAT (Middle East, North Africa and Turkey) region with a presence in 13 countries, serving over 9 million active customers and with \$317 billion total assets. The Group has operations in the UAE, Egypt, India, Turkey, the Kingdom of Saudi Arabia, Singapore, the United Kingdom, Austria, Germany, Russia and Bahrain and representative offices in China and Indonesia with a total of 787 branches and 4,526 ATMs / SDMs. For more information visit: www.emiratesnbd.com.

ABOUT AMD

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