# Microsoft announces ND A100 v4 VM series—a new series of AI virtual machines

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Microsoft has announced the development of its new ND A100 v4
VM—an AI virtual machine series designed to give its customers a
massive AI processing boost. Microsoft made the announcement on its
Azure blog, saying that the new series will be available soon.

Projects based on artificial intelligence tend to require a lot of computer power—more than most organizations have on hand. This situation has led big companies like Microsoft to develop AI systems that can be accessed via the internet. Training such systems typically requires more resources than its customers have access to, which has led to the development of partially trained systems—the bulk of the training is done by a team at Microsoft, leaving customers to add a minor amount of training for their unique application. And as AI applications have matured, more customers have set up in-house development teams to allow them to take advantage of the new abilities. This has led to the development of applications such as AI-assisted loan approvals by banks. And as customers have grown to rely more heavily on these applications, companies like Microsoft that supply the systems have come under pressure to provide more power. In its blog post, Microsoft is announcing its most powerful AI virtual machine series to date—its brand-new ND A100 v4 VM series.

The new virtual machine series starts with eight NVIDIA Ampere A100 GPUs—from there, customers can ramp up to as many GPUs as they need—each has 1.6Tb/s of bandwidth. The GPUs (which are faster on AI applications than CPUs) are all connected via a 200GB/s InfiniBand link. In its blog post, Microsoft claims this offers customers 16 times more bandwidth than its competitors.

Microsoft also points out that the new series will be backed up by a newly engineered AMD Rome-powered platform that conforms to all industry hardware standards, and will therefore be twice as fast as their current platform. Microsoft says the new system will give customers a two to three times boost in performance compared to the current virtual machines series, and customers will not have to do any new engineering work on their end as part of setup.

**More information:** azure.microsoft.com/en-us/blog … puting-to-

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