

# Singapore's first national Petascale computing facility named ASPIRE 1

Mr. Peter Ho, Chairman of the NSCC Steering Committee unveiled the Advanced Supercomputer for Petascale Innovation, Research and Enterprise or ASPIRE 1.

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By Priyankar Bhunia



*Image courtesy National Supercomputing Centre Singapore*

Last month, Mr. Peter Ho, Chairman of the National Supercomputing Centre Singapore ([NSCC](#)) Steering Committee unveiled the **Advanced Supercomputer for Petascale Innovation, Research and Enterprise or ASPIRE 1**, Singapore's first national petascale computing facility.

ASPIRE 1 has 1.01 PetaFLOPS of compute throughput, 13 PetaBytes tiered storage, with burst I/O of up to 500GBytes/sec. This supercomputer has 1,288 nodes and about 30,000 cores, including 128 GPU nodes, a few high memory nodes from 1TB, 2TB and 6TB RAM.

As needs grow to simulate and model natural and engineered systems to a high degree of fidelity and supercomputing plays an expanding role in many areas of scientific research, **NSCC aims to democratise supercomputing**, providing state-of-the-art, plug-and-use High Performance Computing (HPC) facilities. The founding stakeholders of NSCC, the Agency for Science, Technology and Research ([A\\*STAR](#)), Nanyang Technological University (NTU), National University

of Singapore (NUS) and Singapore University of Technology and Design (SUTD), have directly plugged their existing infrastructure into NSCC's supercomputing facility.

NSCC enrollment system is federated with [SingAREN](#) (Singapore Advanced Research and Education Network) to facilitate users from NUS, NTU, A\*STAR to enrol seamlessly to NSCC System. SingAREN Lightwave Internet Exchange facilitates efficient exchanges of local traffic from Singapore's Research and Education community and provides international connectivity with overseas Research and Education Networks. Both NUS and NTU have login nodes deployed in their campuses for students and academic staff In order to provide high-speed direct access to the NSCC PetaFLOP system.



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Priyankar is based out of our Singapore office and is part of the editorial team. An engineer and MBA by education, he has prior experience in investment banking, media and tech startups. He spends his spare time reading and rambling.