

HPC at NCHC

Taiwania 3 & Forerunner 1 Next-generation HPC

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TAIWANIA 3 is a supercomputer built by the National Center for High-performance Computing (NCHC) in Taiwan in 2020. It consists of 900 computing nodes, featuring 50,400 computing cores, and the overall system performance can reach 2.7 PFLOPS. This system is a versatile computing host that can provide computing services in various fields, including physics, chemistry, mathematics, atmospheric sciences, engineering applications, and life sciences. In addition to commercial software packages, the system also offers multiple compilers and MPI libraries for researchers to develop their computing programs.

Due to the near full capacity load of the TAIWANIA 3 system by the end of 2022, NCHC plans to establish a new HPC system, Forerunner in 2023. It is expected that this new system will production run in the second quarter of 2024. The new system is projected to include 552 X86 computing nodes (with a total of 62,272 cores) and 40 ARM computing nodes (with a total of 5,760 cores). The overall system performance is anticipated to reach 3.4 PFLOPS. All computing nodes will be interconnected using NVIDIA Infiniband NDR200 to provide the necessary bandwidth for computation and access to the Parallel File System. The total capacity of the Parallel File System is approximately 9.2 PB.



TAIWANIA 3



2020/11

Forerunner 1 創進一號



2023/11

