

# New generation computing facilities at NCHC

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## Abstract

The computing facilities at NCHC has dramatic upgrade this year. The new generation of PFLOPS-level supercomputer was ranked as 95<sup>th</sup> in TOP500 (1.33 PFLOPS ; in the end of 2017) and will be opened for use in the second quarter. It contains 27,760 cores, which is composed of 630 CPU nodes and 64 GPU nodes, can provide 7-fold of computing capacity compared with the current ALPS supercomputer. To assist the promotion of government policy on artificial intelligence (AI), the construction of advanced AI facility under the Forward-looking Infrastructure Development Program lead by MoST is also ongoing. Besides, the 100G high-speed network for Taiwan's research and education has been already operated. Those upgrades can fully satisfy the demand of big data processing for scientific research and industrial application. For structural biology research, a national core facility project "High performance analysis platform service for high throughput nucleic acid sequence and protein structure" , which is the extension of Resource Center project in National Research Program for Biopharmaceuticals (NRPB), has been approved last May and continues to provide the research services for the analysis of next-generation sequencing (NGS) data and protein structures. Combining the coming database projects for precision medicine, we expect to have more research collaboration with the users in the future.