

Super computers

[Technology](#), [Computer](#)



A supercomputer is a computer at the frontline of contemporary processing capacity--particularly speed of calculation. Supercomputers were introduced in the sass, designed initially and, for decades, primarily by Seymour Cray at Control Data Corporation (CDC), Cray Research and subsequent companies bearing his name or monogram.

While the supercomputers of the sass used only a few processors, in the sass machines with thousands of processors began to appear and, by the end of the 20th century, massively parallel supercomputers with tens of thousands of " off-the-shelf" processors were the As of June 2013, China's Tulane-2 procurement is the fastest in the world at 33. 86 petals. Systems with massive numbers of processors generally take one of two paths: In one approach (e. G. In distributed computing), a large number of discrete computers (e. G. , laptops) distributed across a network (e. G. , the Internet) devote some or all of their time to solving a common problem; each individual computer (client) receives and completes many small tasks, reporting the results to a central server which integrates the task results from all the clients into the overall In another approach, a large number of dedicated processors are placed in close proximity to each other (e. . In a computer cluster); this saves considerable time moving data around and makes it possible for the processors to work together (rather than on separate tasks), for example in mesh and hypercube architectures. The use of multi-core processors combined with centralization is an emerging trend; one can think of this as a small cluster (the multiform processor in a smartened, tablet, laptop, etc. That both depends upon and contributes to the Supercomputers play an important role in the field of computational

science, and are used for a wide range of computationally intensive tasks in various fields, including quantum mechanics, weather forecasting, climate research, oil and gas exploration, molecular modeling (computing the structures and properties of chemical compounds, biological macromolecules, polymers, and crystals), and physical simulations (such as simulations of the early moments of the universe, airplane and spacecraft aerodynamics, the detonation of nuclear weapons, and nuclear fusion).

Throughout their history, they have been essential in the field of counter-cryptography.