Center for Experimental Research in Parallel Algorithms, Software and Systems (CERPASS)

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Description

The Center for Experimental Research in Parallel Algorithms, Software and Systems (CERPASS) provides an experimental facility for researchers on the Internet.

The Center's parallel computing resource includes a Connection Machine CM-2 and a Symult Series 2010.

The Connection Machine Model CM-2 is a massively parallel SIMD machine. Its hardware consists of 16,384 data processors interconnected via a hypercube network. Each processor has a bit-serial ALU and a 64K-bit local memory. This CM-2 has two front-end subsystems -- one VAX 6210 and one Symbolics 3600, a 5-Gigabyte mass storage system and a graphic color display device. Half of the machine (i.e., 8,192 processors) is also equipped with floating-point accelerator. Programming languages available on this machine include *Lisp, C* and Paris interfaces to Commonlisp and C.

The Symult S2010 is a message-passing, distributed memory MIMD machine. Its hardware consists of 32 computational nodes. Each node has a 32-bit Motorola 68020 microprocessor as its CPU, augmented by the Motorola 68881 floating-point coprocessors. Each node has 8MB local memory, and is connected with other nodes via a high-speed message-routing network (GigaLink). This machine uses a Sun-3 front-end, and can be programmed in C and the parallel extension written for this machine.

Network Access

Both the CM-2 and the Symult S2010 can be accessed from Internet via their VAX and SUN front-ends, respectively.

Who Can Use The Center

Any organization working under a government contract or grant may apply for use of the CERPASS facility for parallel processing research. To establish an account, please contact the address above.

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