### **BRL** – US Army Research Laboratory (Ballistic Research Lab)

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### Description

The Ballistic Research Laboratory (BRL) has a long history of participation in the forefront of computing technology. At present, the BRL Super Computing Facility includes two High Speed Processors: a Cray X-MP4/8 operating in unclassified mode and a Cray-2 operating in classified. Both systems utilize the UNICOS 6.1.12 operating system and implement Cray's Network Queing System (NQS) for batch processing and Data Migration (DM) software.

The Cray X-MP/48 has four processors with an 8.5 nanosecond clock rate, 8 Million 64-bit words of main memory, and a 128 Million 64-bit word Solid State Disk (SSD) available to all through logical device caching and swap space. The clock rate enables the machine to operate in the range of 250 MFLOPS. There are approximately 40 Gigabytes of on-line mass storage, and interfaces to IBM 3480 and IBM 3420 magnetic tape devices. Available applications software include: DISSPLA; DISSPOP; IMSL; MPGS; BRLCAD; PICSURE; ABAQUS; LINDO; MSC/NASTRAN; MSC/DYNA; MSC/PISCES; and LQGALPH. Available compilers include: CFT; CF77; Pascal; and C. The Cray X-MP/48 is available 24 hours per day, 365 days per year; however, it is not attended during evening or midnight shifts on weekends or holidays.

The Cray-2 has four processors operating with a 4.1 nanosecond clock rate. This machine has 256 Million 64-bit words of main memory, and operates in the range of 500 Million Floating Point Operations per Second (MFLOPS). There are approximately 60 Gigabytes of on-line mass storage, and an interface to IBM 3480 magnetic tape and to a MASSTOR M860 robotic tape device. Available applications software include: DISPPLA; DISSPOP; IMSL; MPGS; BRLCAD; PICSURE; CADPAC; and GAMESS. Available compilers include: CFT; CF77; Pascal; SIMSCRIPT; and C. The Cray-2 is available and attended 24 hours a day, 7 days a week.

#### **Network Access**

The Cray X-MP is accessible via the Internet, and has dial-up accessibility. The Cray-2 occupies a node on the Defense Secure Network (DSNET), and has dial-up accessibility via Secure Telephone Units (STU-III).

The information in this section is provided in accordance with the copyright notice appearing at the front of this guide.

# Who Can Use BRL Resources

BRL resources are available to DOD Agencies and qualified Government Contractors.

# Miscellaneous

Further information about the Cray X-MP/48 is available by writing:

Director US Army Ballistic Research Lab ATTN: SLCBR-SE-A (Denice Brown) Aberdeen Proving Ground, MD 21005-5066

or

Phoning (410) 278-6269, or sending electronic mail to sys-admin-xmp.brl.mil (Internet)

Further information about the Cray-2 is available by writing:

Director, US Army Ballistic Research Lab ATTN: SLCBR-SE-A (Mark Williams) Aberdeen Proving Ground, MD 21005-5066

or

Phoning (410) 278-6664, or sending electronic mail to sys-admin-cray2.brl.mil (Internet)