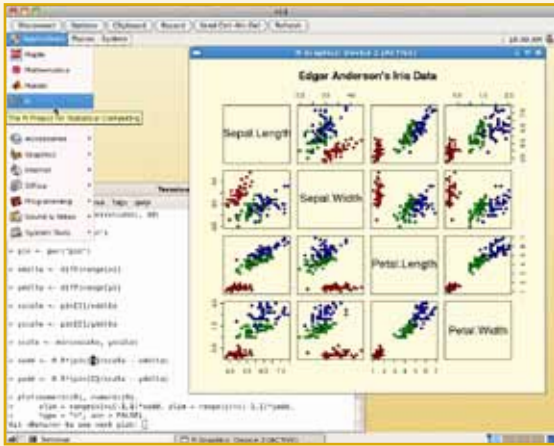


What is CCV?

The Center for Computation and Visualization provides **high-performance computing and visualization** services to the Brown community.

Faculty members, researchers, and students turn to CCV when they need to:

- produce, store, backup, analyze or visualize large datasets
- transfer and share data at high bandwidths through a parallel file system
- take advantage of optimized numerical libraries and scientific applications
- run, test or debug parallel or compute-intensive algorithms and applications
- access computing systems with specialized hardware, such as large memories or GPU co-accelerators
- integrate externally funded hardware into an on-campus data center
- use Virtual Network Computing (VNC) sessions to remotely run UNIX applications or scripts on high-performance and large-memory systems.



VNC sessions can run applications, such as the R statistics package, on CCV systems remotely from a laptop.

<http://ccv.brown.edu/>

Center for Computation & Visualization

Brown University

Box 1824

94 Waterman Street

Providence, RI 02912

Phone: (401) 863-7557

Fax: (401) 863-9265

Hours:

8:30AM - 5:00PM (Academic Year)

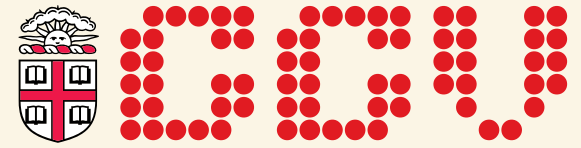
8:00AM - 4:00PM (Summer)

For more information:

info@ccv.brown.edu

For support with CCV systems:

support@ccv.brown.edu



BROWN UNIVERSITY CENTER FOR
COMPUTATION & VISUALIZATION





Research Data Storage

RData is a high-performance storage system for research data that

- is accessible from all CCV systems
- can be mounted on PC or Mac computers on Brown's campus network
- is backed up on a nightly incremental basis.

All faculty receive a free data storage allocation on RData. Additional storage can be purchased on an annual or long term basis.

We also maintain a **backup and archival** server and tape library for on-campus research systems.

User Services & Support

Our staff consult with prospective users to determine the best use of our systems. We offer support through many activities, including:

- software and application installation, optimization, and maintenance
- code debugging, profiling and parallelization
- education and outreach through documentation, workshops, seminars, and courses
- proposal development for CCV-related projects
- application development for funded, collaborative projects.



Visualization

We maintain an advanced virtual reality and visualization laboratory.

The CAVE is an immersive 3D display system with projected images on the surrounding walls and floor. Specialized glasses and input devices provide stereo depth perception while tracking body position and orientation.

A high-resolution stereo **tilted display wall** can be used with or without tracking, and is well suited as a data exploration tool for small groups and research labs.

We also provide **custom solutions** to help departments and labs with specialized visualization installations and application development and deployment.

Other Services

DropBox, a service for sharing files that are too large for email (<http://dropbox.brown.edu>).

Server hosting for both virtual and physical hosting of Linux-based research computing systems.



High-Performance Computing

CCV's HPC resources equip the Brown research community to undertake complex numerical simulation, modeling, and data analysis.

Our flagship **computer cluster** has several hundred multi-core nodes sharing a high-performance interconnect and file system. Applications are run interactively or scheduled as batch jobs.

Several **large-memory nodes** provide substantially more memory than is available on typical workstations and laptops.

A large collection of software is available on CCV systems, including:

- python, perl, R, Matlab, Mathematica, Maple
- optimized math and science libraries
- domain-specific applications

We can help acquire and install most software on request.

Some services are offered at no cost and some at a subsidized cost. Please visit our website for up-to-date rates and technical specifications for all services.



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