XSEDE

The Extreme Science and Engineering Discovery Environment (XSEDE) is the most advanced, powerful, and robust collection of integrated advanced digital resources and services in the world. It is a single virtual system that scientists can use to interactively share computing resources, data, and expertise.

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What resources are available on XSEDE?

XSEDE resources may be broadly categorized as follows: High Performance Computing, High Throughput Computing, Visualization, Storage, and Data Services. Many resources provide overlapping functionality across categories. For more information visit the list of XSEDE resources.

Who uses XSEDE resources?

Scientists and engineers around the world use these resources and services—things like supercomputers, collections of data, and new tools—to make our lives healthier, safer, and better. XSEDE, and the experts who lead the program, will make these resources easier to use and help more people use them.

Can I get a XSEDE account and how much does it cost?

XSEDE accounts are free of charge and can be created at the XSEDE User Portal (XUP). Having an XUP account does not grant you access to XSEDE resources or compute time on any XSEDE resource. Compute time on XSEDE resources is granted via the allocations process. You may apply for a new allocation or get added to an existing allocation.

What is a XSEDE Allocation?

XSEDE Allocation is an application process where users are awarded access to compute, visualization, and/or storage resources as well as extended support services. XSEDE has various types of allocations from short term exploratory request to year long projects. In order to get access to XSEDE resources you must have an allocation.

Allocation Types

A user may apply for one of the following allocation types:

- Startup: The fastest way to get started on XSEDE. Startup allocations require minimum documentation, are reviewed all year long, and are valid for one year. These are mainly for exploratory purposes and are usually used to generate preliminary results to support large research allocation requests. Startup allocations have a maximum total allocation of 200K CPU hours or Service Units (SUs) though each XSEDE resource may have a different limit for startup allocations.
- Education: Education allocations are for academic or training classes such as those provided at a university that have specific begin and end dates. In addition to training classes, education projects support classroom instruction. Education allocations are appropriate for academic courses or training classes having a registration number, class description, and known timeframe. Education requests have the same allocation size limits as Startup requests. PIs on education allocations must be faculty.
- Research: Research allocation requests are reviewed quarterly and require more formal documentation. Research allocations will be granted for one year and may be renewed or extended.

Who is eligible to apply for an allocation?

To apply, the principal investigator (PI) must be a researcher or educator at a U.S.-based institution, including federal research labs or commercial organizations, though additional information may be needed from researchers not affiliated with academic or non-profit research institutions. A postdoctoral researcher is eligible to serve as PI. After receiving an allocation, PIs can request that students be given accounts to use the allocation.

Visit https://portal.xsede.org/allocations-overview#writing for more information on writing and submitting an allocation proposal.

For more details on allocation policies, please visit https://portal.xsede.org/group/xup/allocation-policies.

How do I get started on XSEDE?

To get started, visit the XSEDE Getting Started Guide. Please visit https://www.xsede.org/resources/overview for a detailed list of XSEDE computing, visualization and storage resources at each of the partner sites with links to detailed specifications and user guides for each machine.

Is there anyone on campus that can provide support or approach for help on XSEDE? What is a XSEDE Campus Champion?
The Campus Champions program supports campus representatives as a local source of knowledge about high-performance and high-throughput computing and other digital services, opportunities and resources. This knowledge and assistance empowers campus researchers, educators, and students to advance scientific discovery.

Lehigh University participates in the XSEDE Campus Champions program. Alex Pacheco, Manager of LTS Research Computing Team serves as the XSEDE Campus Champion for Lehigh University.

The XSEDE Campus Champion can

1. provide information on XSEDE and cyberinfrastructure resources to Lehigh researchers and educators,
2. assist users to quickly get start-up allocations of computing time on XSEDE systems,
3. host awareness sessions about XSEDE resources and services, and
4. host training workshops about the use of XSEDE resources and services,

Questions, request for information, assistance or support on XSEDE resources should be addressed to the XSEDE Campus Champion.

XSEDE Training Opportunities

XSEDE offers training throughout the year listed on the XSEDE Course Calendar and maintains a collection of online training resources. The Research Computing team facilitates training provided by XSEDE partners, for a list of upcoming trainings please visit the training page.

How to acknowledge XSEDE?

Papers, presentations, and other publications that feature work that relied on XSEDE resources, services or expertise should cite the following publication:


In addition it should include the following acknowledgement:

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