

## Engineering IT Facilities Statement + Other Available Resources

Last updated: 5/22/2019 - [https://go.engineering.illinois.edu/EngrIT\\_Facilities](https://go.engineering.illinois.edu/EngrIT_Facilities)

The College of Engineering's consolidated IT support group, Engineering IT Shared Services, provides the following information technology services that have been approved by the University of Illinois' Grants and Contracts Office as cost recovery services that are eligible to be paid by grant funds:

- Research System Support
- Server Management
- High Performance Computing/Cluster Support
- Data Storage and Backup
- Web Development
- Application Development
- Video Conferencing System Support

Descriptions of these services, as well as the full catalog of Engineering IT Shared Services' offerings, can be found on the unit's public website (<http://it.engineering.illinois.edu/services>).

### Research Services

Research Services provides specialized IT support for Engineering research including non-standard software applications, high level computation, and specialized hardware and equipment. Researcher workstations, servers, virtual machines (VMs), high performance computing (HPC), high throughput computing (HTC), cluster management, storage, and more are enabled through consultation that allows the researcher to advance from innovation toward scalable infrastructure. Research Technology Facilitation and consultation enables research IT to operate efficiently and collaborates on a path toward growth and potential sustainability beyond the lifetime of a grant.

The College of Engineering has made an investment in ***Illinois Campus Cluster Program (ICCP)***: <https://campuscluster.illinois.edu/> which provides access to computing and data storage resources and frees you from the hassle of administering your own compute cluster. Any individual, research team, or campus unit can invest in compute nodes or storage disks or pay a fee for on-demand use of compute cycles or storage space. Staffing and shared infrastructure fees are partially subsidized by campus to help keep your costs as low as possible. See their website for additional Facilities Statements. High Throughput Computing (HTC) modalities are also available to campus.

The College of Engineering ICCP Investment:

- 101 CPU nodes and 16 GPU nodes with InfiniBand interconnect comprised of:
  - 7 dual-socket Intel Xeon Gold 6148 GPU nodes w/ 192GB RAM & 2 NVIDIA V100 GPUs (280 total CPU cores)

- ⌘ 2 dual-socket Intel Xeon E5-2680v4 GPU nodes w/ 256GB RAM & 1 NVIDIA P100 GPU (56 total CPU cores)
- ⌘ 8 dual-socket Intel Xeon E5-2680v4 CPU nodes w/ 256GB RAM (224 CPU total cores)
- ⌘ 8 dual-socket Intel Xeon E5-2680v4 CPU nodes w/ 64GB RAM (224 CPU total cores)
- ⌘ 76 Dell Xeon E5-2690 v3 CPU nodes w/ 256GB RAM (1,824 CPU total cores)
- 21TB compute storage + 10TB Research Storage as a Services (RSaaS) access

Research Services will engage during the proposal process up through the build process and into service and equipment maintenance. For more information, please visit the Research Services website <https://it.engineering.illinois.edu/services/user-support/research-support> or contact Laura T. Herriott, Assistant Director for Research Services at [herrio@illinois.edu](mailto:herrio@illinois.edu).

### Instructional Services

Instructional Services Team manages over 1,450 Engineering workstations and 100 specialized software for 109 Windows and Linux labs. In addition, the team provides support in the operations and maintenance of computer systems in specialized teaching and student design labs as well as a computer-based testing facility. High-demand Engineering applications can be accessed through Instructional Services' Citrix and FastX services. The Multimedia and Educational Technology part of the team provides consultation, design, and support on audiovisual and multimedia systems for all Engineering classrooms and conference rooms. The team's lecture/presentation capture and video conferencing services can be used to create content for online distribution. Instructional technology facilitation assists Engineering faculty and instructors in identifying technologies, resources, services, and expertise to support their teaching and their students' learning.

### Technology Facilitation

Technology Facilitators provide consulting and facilitation services in the areas of Instruction and Research. They are available to partner with individual faculty members and research teams to identify their IT needs, advise, and help ensure those needs are met with the right technology solution whether it is offered by Engineering IT, elsewhere on campus, or beyond. If no suitable service exists, the Technology Facilitators can offer consultation on the purchase of computing hardware, software licensing, system security solutions, and more. Technology Facilitators work closely with the Instructional Services and Research Services teams, as well as Engineering IT's enterprise-scale infrastructure specialists, with decades of combined experience in supporting a wide range of solutions with a goal of finding and implementing technologies that best suit the requirements of research or instructional projects.

## IT Operations

### Infrastructure

Infrastructure builds and maintains Engineering IT's on-prem large scale server and data storage services. This includes VMWare based virtual machine farms housed across three data centers used for instruction and by researchers.

Infrastructure also plays a role in brokering amazon and other cloud based services.

### User Services: Administrative Support

The Administrative Support Team provides College of Engineering Administrative Staff and Faculty with IT consultation and support for University-owned desktops, laptops, and mobile devices. This includes ordering, configuring, troubleshooting, and maintaining computer hardware, software, and networks for the College of Engineering.

### PMO

The PMO staff could help by evaluating proposal content for sound project construction and quality of organization as well as clarity of meaning.

## Web, Application and Information Services

Mission Statement: To provide the College of Engineering with marketing, information and tools essential to making accurate and effective decisions.

Web provides websites in coordination with unit communicators that effectively market visibility, function and mission of the College and the units within.

Applications provide tools necessary to inform, record and improve efficiency for faculty, staff and students. We help academic, administration, facilities, financial and human resource areas bridge the gap between campus provided solutions and individual unit needs. Information on our most common applications can be found at <http://it.engineering.illinois.edu/services/portal-applications-engineering>

Information Services provide information pulled from various sources and compile it into a readable format based on college requirements. Data compiled is reviewed with requestors which range from deans to administrative clerks to give them the information required to make better decisions. Examples include: ASEE and US News and World Report, DARS audit, End of Term processing, Budget and Resource Planning, Scholarship reporting and countless ad-hoc reports.

### IT Architecture

The IT Architect designs and maintains the overall systems and service delivery IT architecture for the College of Engineering. The IT Architect determines the best way to integrate IT resources at the college, campus, and cloud levels and facilitates service transitions and

migrations. By employing a holistic approach that incorporates knowledge of trends in information technology with strategic plans, the IT Architect develops and adapts the long term service roadmaps of Engineering IT Shared Services and ensures that IT services continually meet the academic and research needs of the College of Engineering.

#### Other Available Resources

**Data Management Plan:** <https://www.library.illinois.edu/rds/>

The Research Data Service (RDS) is a campus-wide program that provides the Illinois research community with the expertise, tools, and infrastructure necessary to manage and steward research data.

**Document Repository:** <https://www.ideals.illinois.edu/>

IDEALS, the Illinois Digital Environment for Access to Learning and Scholarship, collects, disseminates, and provides persistent and reliable access to the research and scholarship of faculty, staff, and students at the University of Illinois at Urbana-Champaign.

Faculty, staff, and graduate students can deposit their research and scholarship—unpublished and, in many cases, published—directly into IDEALS. Departments can use IDEALS to distribute their working papers, technical reports, or other research material.

**Data Publication:** <https://databank.illinois.edu/>

The Illinois Data Bank's mission is to centralize, preserve, and provide persistent and reliable access to the research data created by affiliates of the University of Illinois at Urbana-Champaign, such as its faculty, academic staff, and graduate students.