

Core computing: supporting science

Fermilab's Information Technology Division delivers timely, innovative computing solutions and services that enable Fermilab to achieve its mission, efficiently execute the lab's business and provide a modern user experience.

Core business services

Core IT services

Enterprise architecture & service management

IT project management

Networking & communications

**Working together
to keep IT Operations
running smoothly**

Core business services

Providing modern information systems, services and business process solutions

Our services include financial, human resource, environment, health and safety, and facilities applications; engineering; a library; publications and records management; and content management systems.

In a typical year, we:

Serve hundreds of business and scientific colleagues

Implement 500+ enhancements to cloud and on-premise business systems

Provide 55,000 downloads of scientific journals, books and engineering standards

Core IT services

Delivering user devices and the servers and system backup services that support our applications

We provide Windows, Mac and Linux support; physical and virtual server hosting and operating system support; central website hosting; database hosting for business and scientific services; system backup and restoration; centrally managed desktop, laptop and mobile devices; central authentication systems; and Service Desk and managed IT services.

A sample of the items we manage:

5.5 petabytes of storage deployed for SAN, NAS and virtual machines

1,000+ virtual machines (total host capacity: 3.4 THz CPU and 17 TB RAM)

1,200+ managed database instances

Enterprise architecture & service management

Overseeing the business system architecture and providing quality services to the lab's business and scientific communities

We oversee process management, communication, ISO20000 certification and enterprise architecture/design.

In a typical year, we:

Oversee processes responsible for resolving 13,000 incidents, 60,000 requests and 1,300 requests for change

Provide over 400 change-related communications

Review and maintain over 500 services and offerings



Data centers, such as the one shown above at the Feynman Computing Center, are critical to the lab's scientific mission. Our experiments and business areas depend on them to provide reliable computing systems.

IT project management

Helping IT project teams in achieving project objectives and delivering outcomes within an agreed-upon triple constraint (scope, budget and schedule)

We use hard and soft skills to manage projects ranging from short-term, low-cost projects to multi-year, multi-million dollar projects with wide-ranging and significant impact to Fermilab and the U.S. high-energy physics program.

Our team of five:

Oversees 18-20 enterprise-level projects per year

Has managed projects totaling nearly \$40 million over the past 10 years

Has vast experience in 15 types of industries

Networking and communications

Providing all network, telecommunications and audio/visual services

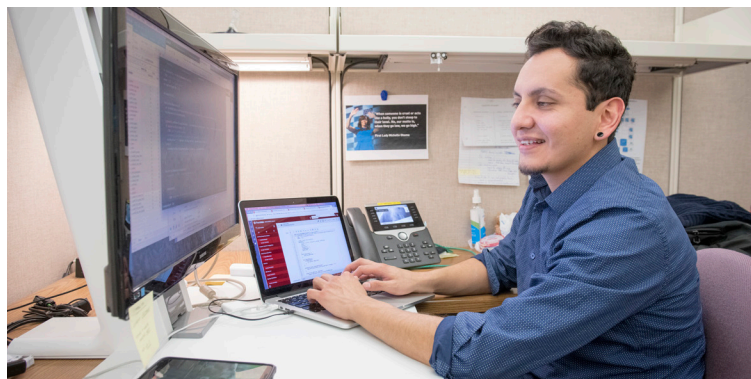
We support the resources necessary for all lab users to share information across Fermilab's 6,800-acre campus, between Fermilab and our far detectors in South Dakota and Minnesota, and to our international research institutions and partners.

Some of the items we oversee:

120 petabytes of data moved across the network per day

35+ million minutes of web conferencing, enabling the collaboration of over 900,000 participants from more than 140 countries

4,700 phone lines and 300+ cellular devices



More than 130 employees across the IT arm work to provide high-quality service to Fermilab's scientific and business communities.



Expert staff from multiple disciplines—networking and communication, business and IT services and applications, project management, and service management—work together to find innovative IT solutions for the laboratory.



The Feynman Computing Center houses two data centers as well as office space for about 150 employees.