Fermilab

Feynman Computing Center Specifications

The Fermilab Feynman Computing Center (FCC) is a three story, multi-purpose building containing two computer rooms, offices, labs, and utilities. The two computer rooms have entirely diverse electrical and cooling infrastructure, and contain servers, disk storage, networking and data storage robotics which serve the computing needs of the Laboratory's business and research programs. These systems are connected using high-speed networking to other facilities at Fermilab and across the world to collect, archive, process, simulate, and analyze data from global scientific programs.

2nd Floor Computer Room

- Built in 1988, with major electrical & cooling upgrades in 2011 and 10283 ft^2 of 24" raised floor space
- Dual 13.8kv feeds from the high-reliability 345kv Master Substation power grid
- 1.5MW Standby Diesel Power Generation
- Electrical Capacity: 750kVA of critical load
- 200 cabinets at <5kW/cabinet (typical)
- 240 tons of cooling capacity; air cooled DX CRAC units; N+1 cooling is maintained
- Under floor water detection system on FCC2
- Raised floor cold air plenum supply
- 250 (lbs/sq.ft.) floor loading

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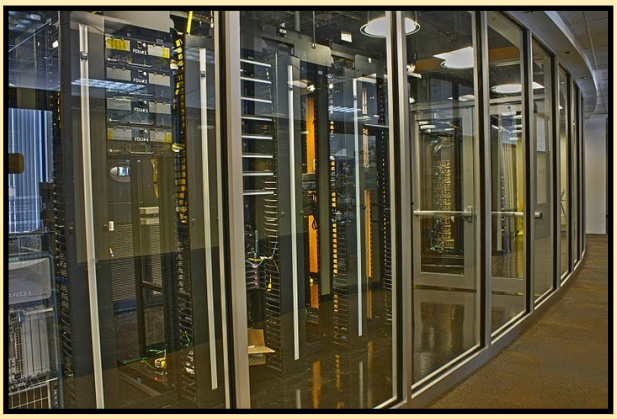
Fermi National Accelerator Laboratory (Fermilab) is a U.S. Department of Energy-funded national laboratory whose mission is to advance the understanding of the fundamental nature of matter and energy by providing leadership and resources for qualified researchers to conduct basic research at the frontiers of high energy physics and related disciplines.



3rd Floor Computer Room

- Constructed 2011 with over 1903 ft^2 solid floor space; 300 ft^2 Comm area
- Onsite 345kv Master Substation delivers single-feed 13.8kv utility power
- 1.5MW Standby Diesel Power Generation
- Electrical Capacity: 750kVA of critical load
- 72 cabinets at 6.6kW (typical)
- 158 tons of cooling capacity; air cooled XDC units; N+1 cooling is maintained
- Hot aisle/cold aisle containment for added energy efficiency

FCC Computer Rooms

- Tier I Level Data Center - electrical service backed up by an uninterruptible power supply (UPS) system and standby generator
- Card key security access control & digital video monitoring and recording
- Fire detection/suppression systems (including HALON suppression/FCC2 & VESDA detection/FCC3)
- 24x7x365 monitoring of building and environmental alarms
- Flood Zone: Outside 100 year flood plain; Seismic: Zone 0
- Overhead cable tray systems