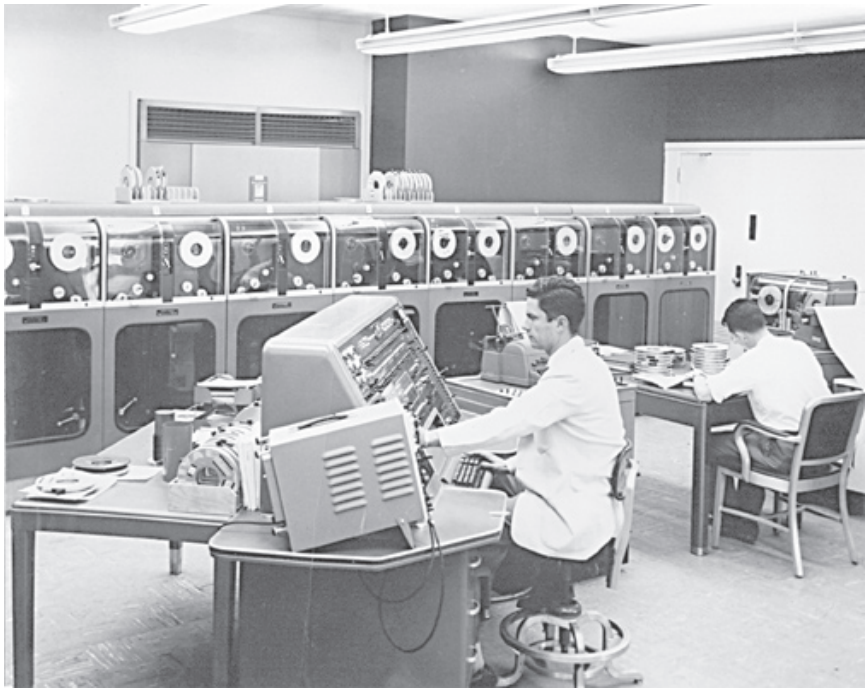
Getting the Data Dump: GE's New Data Center

GE Appliances & Lighting's new data center supports global business growth and manufacturing revitalization – sustainably.

FACT SHEET

A History of Innovation to Support Business Growth

- In 1954, GE installed the UNIVAC computer in its first commercial installation. Prior installations were primarily for government use.[1]
- GE's new data center houses cabinets of servers; just one cabinet is millions of times more powerful than the original UNIVAC.



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From Green to Platinum

- GE's data center is the first data center in Kentucky to be certified as Platinum by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program.
- Of all LEED-certified buildings globally, only 6 percent have achieved Platinum-level certification.[2]

Data center houses 128 cabinets holding high-density servers.

Supporting Unprecedented Business Investment in GE Appliances & Lighting

The new data center will support over a $1 billion investment to upgrade major appliance product lines — including refrigeration, laundry, cooking, dishwashers and water — as well as lighting products, and create Manufacturing Centers of Excellence, which will result in about 1,300 new U.S. jobs by 2014.

Specifically, the data center will operate information systems that enable GE's technology and manufacturing teams to flexibly and efficiently run state-of-the-art factories by:

- Implementing Lean manufacturing processes that improve operational efficiencies to drive down cost;
- Improving customer service through increased fill rates and better billing systems;
- Enhancing product quality and innovation.

Computing Power to Support Global Growth

- GE's data center supports 27,000 employees in more than 100 countries.
- Each refrigerator-sized rack of servers in GE's new facility is designed to run at 18-24 kilowatts (kW) per cabinet compared to the industry average of approximately 4-7 kW/cabinet.[3]
- The speed, scalability and 99.982 percent availability of this design-certified Tier-3 data center help GE operate information systems to run state-of-the-art factories.[4]

Data center battery rooms help ensure availability and reliability.

The Nuts & Bolts – What's Inside?

- 128 refrigerator-size cabinets holding thousands of high-density servers.
- Hundreds of critical IT systems needed to run daily business operations.
- Two massive generators that can supply 72 hours of uninterrupted power without refueling.
- To improve airflow and maximum cooling efficiency, the data center is built on a 4-foot raised floor that's cooled by:
  1. Two 500-ton redundant chillers and
  2. Two 27,000-gallon thermal storage tanks.
- More than 550,000 feet — or over 100 miles — of fiber and copper to support this new infrastructure – which is only 25 percent capacity of the data center's first floor.

Data center utilizes GE solutions, including Entellisys™ Low-Voltage Switchgear.

Two 27,000-gallon thermal storage tanks help cool the facility.

NOTES

1. http://www.ieeeghn.org/wiki/index.php/First-Hand:The_First_Commercial_Computer_Application_at_General_Electric.
2. U.S. Green Building Council (www.usgbc.org) and Green Building Certification institute (www.gbci.org).
3. Sources: Chris Johnston, Chief Engineer-Critical Facilities, Syska Hennessy Group; supported by data from the Data Center User Group (2009) http://www.liebert.com/information_pages/NewsRelease.aspx?id=2976; supported by data from Computer World Magazine http://www.computerworld.com/s/article/9144466/Data_center_density_hits_the_wall (2010).
4. GE's data center is design-certified tier-3 by the Uptime Institute.