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NERDC Operational Services: Unsung Heroes

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NERDC Operational Services: Unsung Heroes

Researchers with huge programs to run depend on them. Students checking their GatorLink accounts rely upon them. Departments with specialized print jobs count on them. Yet few of these people know much about the section of NERDC’s Network Services known as Operational Services. Helping to keep the university community connected to NERDC’s computer complexes, the network, and the Internet, Operational Services is the first line of defense for NERDC’s computing environment.

Who and What is Operational Services?

Operational Services is headed by Assistant Director Dave Pokorney, who also is in charge of Network Services. Overseen by Manager Bill Carr, Operational Services is separate from Network Services but plays an integral part in its mission. Operational Services is the group that makes sure NERDC’s hardware—the actual computers to which NERDC users are connected—stays up and running.

Twenty-four hours a day, Operational Services staff oversees all of the functions of the network, ensuring that NERDC’s systems and applications are performing. When something goes wrong on the network or in one of the computing systems, these are the people who are the first to see the problem. Often, they're able to correct a problem before a single user ever knows there was one at all. They load requested tapes for batch jobs and transfer data to microfiche for storage. When users submit batch jobs to be run, these are the folks who make...
certain they're run on time. When special print jobs come up, such as the printed grades that are mailed to students four times per year, Operations personnel run two high-speed continuous-form printers to make sure they go out on time.

The job of the Operational Services section has changed considerably over the years. In the past, their responsibilities were primarily running and printing jobs for users. Now that most people have PCs and printers on their desks, that job has become decentralized. The focus has changed from doing the work for campus users to assisting users with doing their own work via the network.

The First Line of Defense

Night shift operators (from left) Eric Williams, Keith Evans, Jeremiah Gordon, and Jeanette Davis help NERDC monitor its systems 24-hours-a-day, 7-days-a-week.

It's nearly midnight on a typical weekday. In the Bryant Space Science Center, a phone rings, and a pleasant voice--a real voice, not a machine--says cheerfully, "Data Center." The caller has a problem: he's forgotten his GatorLink password, or she got an error message she doesn't understand, or the printer won't print. Are they out of luck until normal office hours?

Not at NERDC.
Here, a question or problem that comes up, whether at midday on Wednesday or at midnight on Saturday, might very well have a solution at the other end of the phone line. Operations personnel are the first-line troubleshooters for network users both on campus and at various other SUS sites, and they also track and record all reports of network problems. When someone calls NERDC with a network problem, Carr's section performs a sort of triage. Like an emergency room patient, the caller may know a lot about the problem he or she is having, or may only know that "The computer's not working." Instead of "Where does it hurt?", the Operations Services folks ask, "What program are you trying to use?" or "What does your screen say?" The problem is then either handled on the spot or referred to a staff specialist for more specialized "care." And like any hospital emergency room, they're on duty 24-7. The staff also provides some GatorLink user support after CIRCA's regular hours, mostly in the form of resolving password problems. Though they are not a help desk resource, they will try to do whatever is needed to keep users online. Whatever questions they cannot answer they refer appropriately.

What Happens if the Lights Go Out?

Operational Services staff make sure that the network will stay up in the event of a power outage. This group is responsible for the UPS (Uninterruptable Power Supply). This means overseeing the maintenance of a small building filled with batteries that resemble large automobile batteries, plus a diesel generator the size of a small mobile home. These two power sources ensure a continual source of power for NERDC hardware in case of disaster. The batteries are designed to keep the core running for up to 30 minutes, until the power comes back up or the generator can kick in. Operations keeps enough fuel on hand to run the generator for at least 24 hours, long enough for normal power to be restored or to refuel the tank.

On Top of Everything Else...
Nancy Freimuth helps jobs run at NERDC by loading and filing tapes.

In addition to their other duties, each shift at Operational Services has its own special functions. The day shift conducts tours of the machine rooms by special arrangement. Recent tour groups included Air Force personnel and College of Architecture administration.

The evening shift, 4 p.m. to midnight, runs discounted batch jobs that have accumulated during the day. These are jobs that can cost you less if you're willing to wait a little longer for them, a boon for tight departmental and grant budgets.

The night shift, midnight to 8 a.m., runs all the routine, end-of-day jobs for NERDC, including backups. In years past, operators had a rigid schedule to follow regarding what kinds of programs to run, in what order, to make sure everything was done properly. Now the system is much more automated, leaving operators free to prioritize their workload.

Weekend shifts do the Sunday morning scheduled shutdown and IPL (Initial Program Load). They bring the system down cleanly, and bring it back up cleanly, an important job in maintaining the health of the system.

From loading tapes for batch jobs and detecting network problems, to answering users’ calls for help at midnight, maintaining the system is what Operational Services is all about. They are an unseen but indispensable line of defense for NERDC systems.

Your Comments are Welcome

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your comments to:

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