

# The Dream Team

## Choose a team that scores your network high marks.

All managers confront the time-consuming process of hiring and retaining a staff. Having your Oracle programmers leave for greener pastures is one problem, but the network staff is a more crucial piece of your overall infrastructure. Regardless of the technology running on your network, if you don't have a good staff, both the network and its users suffer.

### ESSENTIAL TEAM MEMBERS

Running a network of any size requires your staff to be responsible for three basic areas: operations, engineering, and policy-making and planning.

- Operations include installing and maintaining the wiring plant, deploying and operating all electronics and servers, and responding to reports of network outage.
- Engineering includes evaluating the next generation of network hardware and software, analyzing the escalation of problems, developing the software necessary for network operations, and provisioning network services.
- Policy-making and planning ensure that there is a consistent effort to guarantee that the network responds to the needs of the organization, that network use is guided by a set of acceptable use policies, and that a set procedures is in place to identify, investigate, and resolve alleged information security breaches.

### THE NETWORK PLAYING FIELD

Today's organizations deploy networks to accommodate:

- Desktop connections to one or more network servers for sharing files and printers. These server platforms provide some network services, as well. Desktops also use terminal emulation to reach host computers located elsewhere on the network.
- Desktop connections to one or more data servers running client-server applications.
- Internet access, often via a firewall.
- Internet technologies within the organization's boundaries, often because of their low costs and high levels of functionality.

The kinds of network scenarios you support and the job market determine the kinds of skills you need from a staff in terms of the three areas of networking. Finding a LAN staff is usually easy: Conven-

tional advertising and hiring strategies yield a sufficient applicant pool. Client-server folks are a bit harder to find because good relational database management people fetch a hefty price and seem to leave as soon as you train them in the latest tools or databases.

The real challenge is finding the Unix talent required for Internet and intranet deployments. In my experience, the usual tricks—hiring from within the company; advertising in local, regional, and even national newspapers; and posting to the usual Usenet newsgroups—have not been successful. Other methods, such as going to local companies that have had layoffs (for example, AT&T just laid off thousands in New Jersey) and accessing the emerging World Wide Web-based job searching services, have not yielded satisfactory results either.

### NEW RECRUITS

Another option for finding critical staff members is using a contract programming firm. Organizational

## THE STATS ON STAFFING

The first hiring issue you will encounter is the size your staff should be. Unfortunately, there's no magic solution for the size puzzle. The best approach is to strive for a staff large enough to ensure redundancy and backup for critical staff members. Before designating a number, consider the following characteristics of your network and its users.

- How important is the network to mission-critical activities of your organization? Your answer should guide the level of investment your organization makes in the network and its staff. It also determines the level of network service you must maintain and the number of hours required of your staff to support stable operations.
- How is your organization geographically distributed? Is everyone in one building? If your infrastructure and users are widespread, your staff must be large enough to cover the territory. Remote monitoring tools (SNMP, RMON, and others) can help considerably, but they must be able to monitor your network electronics. And you must make the necessary investments to learn and deploy the software.
- Is your network topology centralized (collapsed backbone) or distributed (edge routers)? Often, topology choices are made for performance and functionality reasons, but consider the maintenance implications of these strategies. Regardless of vendor promises, router firmware upgrades usually require a visit to the physical devices. This is difficult enough to coordinate with a central core of routers, but imagine if the routers are distributed to many buildings. Typically, these upgrades need to be performed on the whole routing core simultaneously.
- How aggressive is your organization and its users? The Gartner Group (Stanford, CT) divides companies into three types (type A is the most aggressive, type B is cautious, and type C is conservative) to help managers understand their company's patterns of behavior with respect to the technology it requires. What is the distribution of aggressive to less aggressive users? The more aggressive the user, the higher the demand for bandwidth, functionality, and performance. You probably have a range of different types of users distributed throughout your network, and you may need to provide different levels of service for different users. When planning the size of your staff, break down the numbers in terms of aggressive, cautious, and conservative users. Also, you should take into account the size of the engineering staff required to test the latest solutions for your more aggressive users.

hiring restrictions have led to greater reliance on contract firms. These firms usually charge by the hour, and short- or long-term commitments are acceptable. Here are some guidelines to observe when contacting a contractor.

- Regardless of what the recruiter says, he or she usually knows a lot less about technical positions than you do.
- Send full job descriptions to the recruiter if possible. This helps him or her get a good understanding of your needs.
- Don't be surprised if you get lots of inappropriate matches. Don't settle for someone inadequate for the task, but don't hold out for the ideal worker. In today's market, everyone wants that ideal Unix systems programmer who can configure your firewall, keep the servers running, write CGI scripts, and walk on water.
- Negotiate the contract worker's salary and always counteroffer.
- Be sure you understand the terms of your contract: Can you hire the contract worker after a set period of time? Will you owe the contract company a fee if you hire the contract worker?
- Don't stick with just one firm. Do some comparison shopping and use recommendations from colleagues and friends.
- Expect various degrees of success with contract workers. Some contract workers will be excellent; others will fall short of expectations, which is hard to swallow given their price tags.

### AN EYE ON THE FUTURE

This is a tough time to build a staff. Once you have scaled the hiring hurdle, you have to focus on maintaining and developing the staff. We'll discuss the realities of staff development and maintenance in future issues of *Net Gains*.

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# Fertile Hiring Grounds

## Tech support could breed a new generation of network managers.

Many network managers began their careers doing some type of technical support, whether internal (dealing with employees' software and hardware) or external (working to provide user support for a specific company's application). Although it might be a good place to start, most network managers would not choose tech support as a career. It would be considered a move from the top of the heap to the bottom of the barrel.

However, starting out in tech support can be a springboard to any number of high-tech career paths. Some people follow the route from technical support to quality assurance and then on to development and programming. Those who support portfolio management software could wind up either in software development or finance. Multimedia tech support representatives might move up through the ranks to produce software or apply their advanced product knowledge to produce their own multimedia ventures.

Technical support can be a bridge to network management. Regan Mahoney, now a partner in a San Francisco-based digital imaging company, worked in tech support at Lotus from 1989 to 1992. In that three-year period, he moved from an entry-level representative posi-

tion to a self-designed position as the supervisor of 25 technical employees. "Finally," he says, "I became an expert on how Lotus' applications interfaced with major products from Novell, 3Com, and others." The next step he took was becoming a certified network administrator. Lotus, which places great importance on a solid technical support department, paid in full for Mahoney's certification training.

### STAR TECH

Because it's unlikely anyone would stay in tech support for the long haul, the best support employees are those who immerse themselves in it, using the education and resources it provides to decide where they might go next. And generally, tech support people are very knowledgeable. As one former beta-testing support person from Borland says, "They have the hardest job in the business, and they usually know the most."

Network managers should recognize that hard-earned knowledge when interviewing candidates from tech support backgrounds. People who begin their careers in tech support, especially at companies with good training programs in place, are well-versed in research, well-tempered, able to deal with people on all levels, and efficient troubleshooters. These are qualities every industry seeks in employees.

Today's tech support departments could prove to be a veritable gold mine of new hires. Perhaps it's time to reevaluate tech support and look at it as a foundation for future network employees.

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