

# ;login:

THE MAGAZINE OF USENIX & SAGE

December 2001 • Volume 26 • Number 8

## inside:

THE WORKPLACE

Jack-of-All-Trades, Master of None

By Carl Shogren

**USENIX & SAGE**

The Advanced Computing Systems Association &  
The System Administrators Guild

# jack-of-all-trades, master of none

## Opinion

I was deep in a discussion the other day with a friend's brother-in-law, who also happens to be the day-to-day administrator for a hospital's Webmail server, when I was told something I had to disagree with. This "maintainer sysad" told me that he was frustrated with the fact that the hospital's administration expected him to "know everything" instead of letting him concentrate on the particular functions of his job. My immediate reply was that this is what had attracted me to the system administration/analyst career path in the first place.

I have always enjoyed having to learn something different with each new task I have been assigned. The initial planning, installation, and implementation of the hardware/software required to perform a task has always been my greatest joy. Sure, each new undertaking involves the risk of being a "novice," but if you have the "sysad gene," as many former colleges of mine have called it, you quickly become a "Jack of the trade," implementing a new system only to leave it later for someone to keep the system running as the "Master" of daily server administration. I have found that to set up a "Sendmail" MTA server or an "Apache" Web server is different with each installation. Different security requirements, hardware limitations, and financial considerations, which really affect all parts of a system, have to be dealt with each time I start a new task. Even the eventual training of the maintainer who will ride shotgun on the system after I leave is different each time, owing to the individuality of people and their varying capabilities.

The pitfalls of this career choice have been as many and as varied as the jobs themselves. My training a 9–5 Monday through Friday IT department employee in the basics of daily server maintenance, and making the tasks involved look easy, has led more than one unknowledgeable job site manager to wonder why he had hired the overpriced original server creator to begin with. I cannot count how many times I have gone into a situation and asked why something was being done a particular way only to get the pat "If it works don't try to fix it" or the ever popular "That's the way it's always been done" replies.

This has made me realize that the knowledge to maintain and keep the system running was in place but not the knowledge to change, upgrade, or even conform the system to new job requirements. Examples like this have led to a growing data consulting field worldwide, with 9–5 IT departments as the primary customer targets. Consultants are great, but with the rapid advancement of technology, both hardware and software, any large or even small company that depends on its IT department for "business," from actual customer products to customer billing, should realize the necessity of having at least one or two of these highly paid "sysad gene"-enabled, 60+ hour-a-week analysts on their permanent payroll. Sorry all you wealthy consultants! Let's admit it: the sysad gene isn't required for an IT employee to follow a well-written manual on day-to-day maintenance of an Oracle Database server that was set up so well that it hasn't been down for other than routine maintenance in two years. But try to get this same step 1, step 2 "by the manual" employee to fine tune this same server after a new firewall has been placed between the database clients and itself and too often the result is a blank stare accompanied by a willingness to blame any problems on the hardware or software.

### by Carl Shogren

Carl Shogren is currently the Senior UNIX System Administrator for AGCO-Corporation, one of the world's largest manufacturers, designers and distributors of agricultural equipment. As a "jack-of-all-trades" he also wears the hat of Backup Oracle DBA.



*shogrence@hotmail.com*

In a field that generates the sort of salaries and opportunities that ours does, I think a distinction needs to be made between system administrators/analysts who only want to specialize in their known daily IT functions, although these are valid and required functions, and the gene-enabled sysads who are always looking forward to the next unknown challenge. Specialization is good, but locking oneself down to the particular task that your present job requires makes you more of a system operator, once again not a bad thing, than a system administrator.

To finish this thought, the conversation with the Webmail server administrator originally started because I showed him how his system had been hacked by a well-known vulnerability of his particular software/hardware implementation. A vulnerability that wasn't in his daily operations manual. 'Nuff said.