

## /var/log/manager

### Parables of System Administration Management

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I've managed intelligent, educated, certified, opinionated, strong-willed, hard-working, and brilliant system administrators across many different companies, industries, states, and countries. Over the years I've found different approaches to connect with and motivate people. Sometimes people need to be directly told to do something, sometimes they need to be left alone to figure things out, and sometimes it's helpful to give them a story that they can use to cope with and overcome challenges. I call these stories my "Parables of Sysadmin."

#### Dealing with Difficult People: The Parable of Camping

We're colleagues, co-workers, friends. We work hard together and we like each other and we get along well. So if I just sucker-punched you right now, what would you do? You'd have two reactions: First, you'd fight back. Punch, pow, crash! Once the dust settled, you'd have a second reaction: You'd be offended. We're colleagues, co-workers, friends; why would you just attack me like that?

Now, imagine we're in the Ocala National Forest campground. It's a beautiful night. We're camping by the lake. It's a moonlit night, stars, campfire. S'mores. And, suddenly, out of the lake, a giant alligator jumps out and attacks you. You'd have two reactions: First, you'd fight back. Punch, pow, crash! Once the dust settled, and assuming you're still alive, you'd have a second reaction: You'd adjust your campsite to be less susceptible to attack. But you wouldn't be "offended." Why not? Because that gator is just an animal, it's not acting with malicious intent.

So now, when we're camping in the Workplace National Forest and the animals come out of the cubicle farm to attack you, why do you get so offended? Just adjust your campsite to be less susceptible to the attack and get back to camping.

#### Understanding Real Prioritization: The Parable of the Fireman

It's December and you're going to buy a new calendar for the coming year. You want an exciting calendar to hang in your cubicle, and you're looking at all the calendars with pictures of firemen. What do they look like? Sweaty, muscle-bound, wearing a helmet, holding an ax in one hand and a rescued kitten in another, with a five-alarm fire behind them. Heroic and sexy.

Did you ever realize that each fireman in this scene represents failure? Every fire that gets put out is a fire that wasn't prevented, which means that the checks and balances of the fire prevention system failed. We didn't conduct safety inspections. We didn't understand the limitations of our internal controls. We didn't have sufficient alerting and suppression systems in our environment. We had to call in some heroes to perform heroic acts to save the day, just like we do every day in our operational environment: We lionize, fetishize even, the heroic act of getting the SAN or the server back online. We recognize people in their annual performance reviews for heroic acts, effectively putting them on the sexy fireman calendar as a reward for saving our kittens.

Let's think about what's really effective. It's the old fire marshal, driving around in a boring old car, carrying a clipboard and walking into places to check sprinkler systems, verify extinguisher charge levels, and validate training plans. No one ever notices this person, yet if the job is done right, there's never a fire. No need for the heroics. No loss incurred. No downtime suffered. Sometimes heroes are necessary, but the truly impactful effort is prevention, monitoring, and fixing the little things. We never give an annual salary bonus to someone for just monitoring a system and reporting on syslog anomalies, since that's someone just "doing their job." Done right, that simple job prevents the need for all the heroics, and it should be rewarded, if not with salary bonuses then at least with a sexy calendar with pictures of syslog files and kittens who never needed rescuing.

### Understanding True Root Causes: The 10-Layer OSI Model

We all know the Seven-Layer OSI model: physical, data link, network, transport, session, presentation, application. This is a great tool for understanding the layered, encapsulated nature of network communications. If the model is going to be truly useful for understanding complexity and solving problems in complex environments, it must be flexible and account for all the complexity. In the spirit of flexibility in changing times and with recognition of the debt we owe to Evi Nemeth's original expansion [1], I propose an updated expansion of the model from seven to 10 layers.

Most sysadmins unconsciously extend the seven-layer model to an eighth layer: the user. That element just on the other side of the application. The space between the chair and the keyboard. Sometimes referenced with the codes 1D-10-T. PEBCAK. L-User. Or, as I call it, "layer eight," the type of problem caused by lack of attention, lack of training, lack of discipline, or lack of patience on the part of the user.

Layer nine is the naturally occurring condition of groups of people, organizations, hierarchies, and how they interact with each other. When a technical problem is caused, propagated, or expanded due to organizational conflicts, disagreements between executives, or people refusing to do something because of something going on in another part of an organization, this is layer nine: the political layer.

Large organizations can introduce major system problems, like significant software purchased for non-existent or incompatible systems, due to misinformed and overly excited executives and senior leaders. Any time an environment is made too complex to manage due to a decision that was not vetted by technical staff, the problem is in layer 10 of the expanded model: the religious layer. Something was done because a true-believer took action without facts, and now we have to live with it.

### Motivating Sysadmins to Be Effective and Relevant

These parables are stories that I tell every day. They're not the only tools in my manager's kit, but they're fun ways to help people. We hear people say the old cliché, "work smarter, not harder," but that's usually as effective as saying, "I want to cure world hunger" or "Let's hire consultants to tell us what to do." What does "working smarter" actually mean to a professional sysadmin? Does it mean to know more about the operating system? Does it mean to take another certification exam? Does it mean agreeing with the manager until the manager goes away and the sysadmin can get back to what he was doing?

Working smarter means maximizing the specific work activities that provide the most benefit to the company's primary business goals. It's a management challenge to understand those goals and keep top technical people on the tasks that make the whole team more effective at supporting those goals. Time spent complaining about others is wasteful (parable of camping), time spent with "all-hands-on-deck" heroic actions is inefficient (parable of the fireman), and time spent trying to solve people-politics-religion problems with more technology just makes things worse in the end (parable of the 10-layer OSI model). I'm the manager, and helping smart sysadmins be effective in big teams is my job.

#### References

[1] As cited by Avi Deitcher in "The Challenges of Open Source in the Enterprise": <http://www.linuxjournal.com/article/10726>.