/var/log/manager
Daily Perspectives for the Sysadmin and the Manager

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Consider a city zoo on a clear blue-skies summer day. Animals to tend and children's field trip groups to marshal. Line up to pet the goats, then stop for a juice break. Underneath the zoo, a subway switching station. Full commuter trains barreling past at 80 miles per hour. Red lights, green lights, timing trains and tracks and stops and people and go-go-go in the pitch-dark tunnels and klieg-bright platforms. You can walk up the steps from the train platform and be at the zoo.

Two worlds in the same place. There's a connection between them, but these two worlds have very different functions and operate with different senses of priority and purpose. They function in different ways, but in the end they are part of the same system, and both have to work correctly for that system to be healthy.

Consider the IT workplace. Instead of zoo and subway station, there are sysadmins and technical managers. I'll leave it to the reader to decide which is best mapped onto which, but the same idea applies: different purposes and vastly different senses of pressure, yet both have to function correctly for the overall system to perform.

It's a Normal Day for a Sysadmin

Sysadmins are different everywhere you go. And good sysadmins are different from everyone around them. But they have some things in common. A sysadmin might start the day early, might start late, might work all day and all night, or might work for 48 straight hours and then sleep until the pager rings. The work flow probably looks like this: You have a ticket queue in RT, you have a mailbox full of alerts, or you have a list of all the things you have to do to keep everything running. If something's down, you work on that first. If someone's complaining, you work on that first. If someone's complaining and telling you in exceptional detail how they know how to do your job better than you, you work on that last. If you've got a lot of things to work on and they're all about the same priority, you work on the things you enjoy most, the things you can get done fastest, or you just alphabetize and start with whatever begins with "A." If you're a truly elite sysadmin, you might alphabetize in Klingon and work from there.

You might find yourself spending a day writing a shell script for 12 hours, just for fun. I remember a particular day very well back in 1997 when I spent 12 hours on a Solaris 2.5.1 box writing arrays, queues, and other such functions in pure /sbin/sh Bourne script. I even figured out an effective approach to do job control for subprocesses before I discovered /bin/jsh. Yes, I had csh, bash, and Perl handy and knew how to use them. But I had a project to finish and a reputation to uphold, and if you can't figure out how to write a decent associative array in Bourne, then what kind of sysadmin are you? Along the way, I rebooted servers, cleared file systems, restarted print queues, reset passwords, and took care of all the annoying little jobs as if I was waving flies off my Jello. It was a pretty typical day: long hours, lots of work, but I was achieving things no one else on my team was even close to capable of doing.

SYSADMIN

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It's a Normal Day for a Technical Manager

Managers are the same everywhere, and I'm no different. On any random day: A high-profile internal user wants to know why his BlackBerry email takes an extra minute to sync, and demands an answer now. The quote for the new monitoring system is 50% over budget, and a project manager needs guidance (and a vendor needs to get put on notice). No fewer than three employees have had grandparents die this week and need to take time off, oh, and I need to arrange to send flowers to funerals. Vice presidents are demanding a report on why customer surveys are down five points in the last month and want to know whether this represents the trend of a failing team. I can predict that in six months I'm going to get asked to make a particular miracle happen, so I ask the team to do some preparatory work so that it won't have to be done in crisis-mode. Then I struggle for five and a half months to get anyone to do anything without force and ultimately face an operational disaster that I knew was coming. I've got budget to pay for all of 15 minutes of training for every employee for the year, if spread out "fairly," and I'll get to hear how the company doesn't "take care of people" when I have to politely and regrettably deny training that isn't directly related to our core task.

And I've got this sysadmin kid in love with esoteric tools spending 12 hours on what I know is only a two-hour job, waving me off like I'm a fly on Jello when I'm talking to him because he's "in the zone" with his Bourne shell "magic" that no one else will understand when he's done with it. At the end of any given day, I might have long hours, lots of work, and feel like I did nothing of any substance at all.

Crisis Day for a Sysadmin

It's all-hands-on-deck. Major system failure. The best sysadmins know their systems to the core. They understand the applications, the protocols, the operating systems (especially the operating systems!), the networks, and the security controls and boundary protections. Understanding what's going on, knowing where to look for the hung process, the full log file, the protocol error, the expired certificate, the incompatible peripheral device, the wonky DNS server that's giving a slow answer, but only for 25% of queries: a true sysadmin is like a magician when there's a major problem.

I fondly remember the time, back in 2007 or so, when I had a serious problem with machine-to-machine communications between servers A and B. Nothing had changed in the environment, yet the systems weren't communicating and the service was failing in very odd ways. I traced it down to a corrupt drift file on server C. I don't even remember the details, other than the fact that the overall system turned out to be very

sensitive to timing, and my Nagios had alerted on what turned out to be a second-order effect of a weird and really subtle NTP problem on a secondary host. When it's a serious problem, everything else stops and a sysadmin is the only one who can save the day.

Crisis Day for a Technical Manager

Keep the VP informed every hour. Keep the customer-facing group updated every 30 minutes. Coordinate people being called in. Prevent people from duplicating effort. Wait, don't we have to pay some of these people time-and-a-half? Do I have approval for that? Take the phone call from finance about the lost revenue while the service is down. Our reportable metrics are going to suffer. Did we get an RT ticket in? The other guys on the team aren't answering their phones and pagers, and we need reinforcements. I don't mean to say I told you so, but didn't I ask for a status report on this subsystem six months ago? Have to start on the briefing I'll have to give tomorrow to the VP or higher, maybe a briefing I'll give while standing up in front of his desk.

Ask the sysadmin for an update, and get waved off because this is hard stuff, you know, and I need to quit bothering him so he can focus. He's pounding away in four xterms at once and seems like he's chasing down a rabbit hole on a server that's not even part of the outage, and he seems completely unable to tell me what he's thinking. I really don't think he's looking in the right place, but there's no one else on the team who can match his skills. So...step back and hope.

We're Working Together—Really, We Are

If you're a rock-star sysadmin with a technical manager asking you for a status update on the fix-action, take a moment to consider that that manager might have been a rock star in his own right and is now having to depend on you. If you're a manager just trying to survive the day and keep your sysadmins in line and out of trouble, just remember, you were once just like them.

Both sides of this story have a role to play and both bring value to the situation. The lesson is to understand the motivations and the perspectives and to value the good and help each other work through the difficult as a team. This is true in both directions, but it's easy to lose patience, and then respect, for each other in a tense situation. Remembering where you came from and providing the right mix of understanding and guidance to others is not easy, but that's what makes an organization work effectively. I'm the manager, and that's my job.

Special thanks to my good friend Hugh Brown at OpenDNS for his suggestions on this column.

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