I’ve written “/var/log/manager” for the past two years. The concept was to open a window into how technical managers think and why they act the way they do, and to offer help and guidance to young sysadmins trying to grow in their careers. This is my last “/var/log/manager,” and I hope you’ve enjoyed reading as much as I’ve enjoyed writing. I’d love to hear from you. What are your thoughts, ideas, and problems with respect to these issues?

Over the last 11 articles, I have covered themes of communication, understanding, leadership, career management, prioritization, and problem-solving. This last “/var/log/manager” entry is my manager’s playbook.

Communicate so people can actually understand [1]. Communication is surprisingly difficult, given that it’s the thing people give the appearance of doing more than anything else. Communicating across boundaries of expertise and understanding is an extra challenge. We assume that a common spoken language like English sets a standard for common understanding, but domain knowledge of a highly technical sysadmin topic is usually not evenly distributed. Communication is improved when you understand the other person and try to hear the sound of your own voice through their ears. Accept that communication isn’t about the shipping, it’s about the receiving and getting the message right so it can be received.

Blame is a counterproductive luxury [2]. What is the purpose of your systems? To provide whatever resource they’re built for. What is your purpose as a sysadmin? To maximize the effectiveness of the systems. In highly complex environments, things go wrong. Add nondeterministic meat-based systems like people and more things are available to go wrong. I consider the whole thing as a holistic system, with silicon, virtual, and meat nodes. When a computer fails due to lack of resources or poor configuration in the network, we don’t question fixing it. When a sysadmin fails due to lack of resources, time, knowledge, or even judgment, it’s easy to blame first. Understand why failures happen and correct the root causes. Sometimes a computer needs to be replaced, and sometimes a person needs to be replaced, but focusing on blame first means you’re not focusing on understanding the complexity of your system.

Don’t believe your own hype [3]. We’re sysadmins, a term I use as a synonym for “rock-star-awesome people.” It can be easy to get caught in a hype cycle and start performing for an audience rather than focusing on the things that matter to the business. Rock stars get to be rock stars through hard work, putting in the time, and sweat equity, and they don’t stop doing those things when they get to be stars. Prioritize the little things, the mundane necessities, and the core functions that make your business successful, and let someone else be the rock star.

Performance tuning and fault isolation analysis works for organizations as well as for systems [4]. When a system isn’t performing well, you analyze and troubleshoot. What are the key performance indicators? Where are the bottlenecks? What are the producers and consumers? The threat vectors and attack surface? Baseline, then measure, adjust, monitor, repeat until there’s a new baseline that meets requirements. I think it’s funny to
talk about systems as made up of both silicon and meat, but the people-based systems we call organizations may be approached, understood, and tuned in much the same way. Understand your systems and optimize them, regardless of what they’re made of.

Help people understand and overcome problems [5]. I like to remind people that their jobs are hard, and that’s why we have them to do the jobs. If the jobs were easy, we’d have someone else. Find ways to help people through their roadblocks so they can get things done. Sometimes that’s a hard push, sometimes it’s removing a blockage, and sometimes it’s just getting in their heads with an idea that they can use in their own way to navigate a problematic terrain.

Do the little things so they don’t become big things [6]. There’s nothing glamorous about doing a time card or taking a certification test. There’s also nothing glamorous about getting fired over something so trivial. Do the easy, mandatory stuff first. Don’t make it your manager’s job to make you do it.

Get in each other’s heads and see the world from someone else’s eyes [7]. People will work best when they bring knowledge, skills, and abilities and they’re met in the middle with guidance, trust, and support. It’s very easy to allow a gulf to come between a sysadmin and a manager and to assume that they don’t understand each other just because they have different priorities. The gulf grows by itself, without any help. It’s important to keep the gap in mutual understanding as small as possible, and shrink it whenever you can.

Finding ways to categorize people is just a step towards understanding them [8]. The goal of any business is supported by computing systems, which are in turn supported by sysadmins. Two equally great sysadmins may have very different abilities. Making an over-generalization about people can be misguided if it’s the only thing you do, but a first step towards understanding someone can be to assess how they learn and how they work. This is a round pegs/round holes situation on the surface, but at its core the real goal is to put an individual sysadmin in a role that maximizes their capabilities.

Don’t treat outliers like they’re the new normal [9]. In large organizations and large systems, the chances are high that something unexpected will happen at some point. If something really weird, out of the ordinary, and stupid happens, remind everyone around you that the most important thing is “out of the ordinary.” It’s incredibly wasteful to re-engineer a complex process because there’s one outlier, but it is human nature to focus on the outlier. As we say in the South, “The high nail gets the hammer.” Conversely, if you find yourself explaining away a lot of weird events as outliers, you might want to reassess your baseline of normal.

Understand why people come to work, and give them reasons to keep coming to work [10]. Each employee has a unique situation and a personal set of motivators that they themselves may not truly understand. Taking the time to codify why people come to work is the first step. Figuring out which parts you can actually influence is the second step. Actively doing things to positively influence those things is the approach, and the goal is to keep smart people happy and productive.

Don’t let your information flow become your enemy [11]. Understand your own information inputs, outputs, and repositories. Understand and articulate your own personal priorities. Make information flow be your tool rather than your nemesis. Always prioritize people first, and give your attention to the person you’re talking to.

Be the manager, but don’t forget to be the leader. The difference between being the manager and being the leader is simply where you stand: managers are in the back directing, while leaders are in the front leading. Managers tell you what to do, and leaders inspire you to do it. The best are those who are both at the same time.

I will leave you with a last thought: when you’ve been following leaders, mentors, and guides as you moved through your career, one day you’ll realize that you don’t have anyone leading you anymore. Just look over your shoulder. You’ll find a line of people who have been following you all along and you didn’t even realize it. At that moment, you become the leader you were looking for.
/var/log/manager: I’m the Manager, This Is My Job

References


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The program committees of the following conferences are seeking submissions. CiteSeer ranks the USENIX Conference Proceedings among the top ten highest-impact publication venues for computer science.

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March 19, 2016, Santa Clara, CA  
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The 2016 USENIX Workshop on Cool Topics in Sustainable Data Centers (CoolDC ’16) is a forum to disseminate results and stimulate further cutting-edge research in quantitative design, evaluation, and research methods for sustainable data centers. The goal of the workshop is to become a venue where experts in sustainable energy systems, data center physical infrastructure, networking and server architecture, cloud computing, and internet-scale applications can come together to exchange ideas on how to maintain and improve the sustainability of warehouse-scale computer infrastructure.

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June 22-24, 2016, Denver, CO  
Paper and Talk submissions due February 1, 2016  
USENIX ATC ’15 will again bring together leading systems researchers for cutting-edge systems research and unlimited opportunities to gain insight into a variety of must-know topics, including virtualization, system administration, cloud computing, security, and networking.

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Paper submissions due March 8, 2016  
HotCloud brings together researchers and practitioners from academia and industry working on cloud computing technologies to share their perspectives, report on recent developments, discuss research in progress, and identify new/emerging “hot” trends in this important area. While cloud computing has gained traction over the past few years, many challenges remain in the design, implementation, and deployment of cloud computing.

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June 20-21, 2016, Denver, CO  
Paper submissions due March 10, 2016  
The purpose of the HotStorage workshop is to provide a forum for the cutting edge in storage research, where researchers can exchange ideas and engage in discussions with their colleagues. The workshop seeks submissions that explore longer-term challenges and opportunities for the storage research community. Submissions should propose new research directions, advocate non-traditional approaches, or report on noteworthy actual experience in an emerging area. We particularly value submissions that effectively advocate fresh, unorthodox, unexpected, controversial, or counterintuitive ideas for advancing the state of the art.

Submissions will be judged on their originality, technical merit, topical relevance, and likelihood of leading to insightful discussions that will influence future storage systems research. In keeping with the goals of the HotStorage workshop, the review process will heavily favor submissions that are forward-looking and open-ended, as opposed to those that summarize mature work or are intended as a stepping stone to a top-tier conference publication in the short term.

**OSDI ’16: 12th USENIX Symposium on Operating Systems Design and Implementation**  
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Abstract registration due May 3, 2016  
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