

# /var/log/manager

## A Generational Theory of Sysadmins

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System administrators start from someplace. They're born to it, they're trained for it, or maybe they just fall into it. Regardless of the origin story, each sysadmin brings a certain something, a fire in the belly, an approach that is creative and inquisitive, and a motivation that is oddly tough to pin down. Over the past few years of hiring technical staff, I started getting a feeling that the type of sysadmin I was used to finding just wasn't as common any more. I felt like something was changing in the work force, which led me to develop my own "theory" of generations of sysadmins and ultimately to change how I approach hiring and managing sysadmins who don't fit into just one model.

### The Explorer

Before my own career logs were being written into `/var/log/manager`, I was a pure and serious sysadmin. I wasn't just the master of esoterica, I was frequently the only person in the whole operation who knew certain things. I was the only one who knew what a "magic number" was. I was the only sysadmin who could write code in FORTH, and I applied that skill to write custom boot orders for Sun servers. I saw operating systems, databases, HTTP, SMTP, NNTP, IRC, TCL/TK/Expect, Perl, and Motif as all dialects of the same underlying language, and I spent incredible amounts of time burrowing into the oddest little artifacts of an operating system and gaining the most intimate understanding of every system and how it interacted.

My own electricity bill was a monthly casualty of these explorations. I didn't do all this exploring and tinkering on company time, although I didn't not do it on company time either; I spent considerable home time and personal expense building out servers and labs and filling rooms with boxes and cables. It's remarkable that my wife is still with me after I spent the first decade of our marriage duct-taping Ethernet cables across the floor. I was incredibly personally invested.

I was the young guy on the team. The older folks, my mentors and managers, didn't seem to have had my type of personal, home investment when they were younger. Something about needing whole power substations to run a home lab made out of Honeywell gear, or the expense of buying your own PDP-11. Apparently, a nine-track tape cabinet is a serious spouse irritant. That didn't stop them from being brilliant contributors on the job and fine mentors to young kids like me, but they had obviously learned the trade differently than I was doing.

### The Wall of Certs

Today, I'm the old guy, and I interview young people looking for jobs. I'll find people who have home labs, but it's usually to build out an environment in order to study for a certification exam. This means that a home lab is constructed to install a trial version Microsoft Windows Server 2008R2 with SQL Server and Active Directory. It's a good drill and has a positive result when it comes to test time, but you don't find as many young people today running a half-dozen different operating systems at a time just to see which one is the most "fun." To

a non-sysadmin, that kind of activity probably seems wasteful and more than a little useless, but to me the benefits of understanding how an OS performs can't be replicated easily in other ways. "Fun" is a feature of the learning.

## Generations of Sysadmins

This slow change in the type of applicants I see has had me thinking about what's changed. Perhaps there are distinct generations of sysadmins. Making a notional model of something poorly understood helps with the understanding; we do this all the time at the whiteboard when troubleshooting. A little bit of time at my manager's whiteboard produced an informal "Generational Theory of Sysadmins."

1. The Baby Boomers learned about computing in college, were trained as electrical or mechanical engineers, or happened to be serious workshop hobbyists. Being a sysadmin meant having a soldering iron and an oscilloscope. They bought kits or built rudimentary computers in garages and helped spark the personal computing market. These are the senior sysadmins and managers who are starting to retire. I think of them as "Builders."
2. Generation Xers grew up with those Boomers. This was the first generation to be exposed as kids to personal computing. There were commercial boxes you could buy and games to play, but it was still in the "some assembly required" space. A kid might have to type in a thousand lines of BASIC from a magazine in order to play a game, but ultimately there was a computer and a computer game in the home, and that pushed the kid into typing it in and, eventually, figuring it out. These are today's mid-career sysadmins and managers who are hiring and mentoring the next generation. I started out thinking of them as "Hackers," but that's a word that means too many different things to people for it to be the best word. "Explorers" is a better word.
3. Millennials, aka Generation Y, are in the early stages of their careers. They're college graduates and certification-holders, and they grew up in households where computers were bought but not built, and where software was bought or downloaded and installed, but not necessarily written and certainly never typed in from a magazine. Even the more technical Gen-Y people still see computing as something to assemble and use rather than something to build and figure out. I think of them as "Users of Tools."
4. Generation Z is expert with modern technology. I can install a new game app on my smartphone and hand it to my four year old, and with zero training he can be up and running in barely minutes ("Dad, this is awesome!" said the boy two minutes after I handed him "Cut the Rope"). Yet it's misguided to think of these youngsters as technologically savvy. What they have is the ability to intuitively grasp today's well-designed UIs and easily approach communications as an abstract concept.

They've grown up hearing grandma's voice coming out of the ether of a vehicle's Bluetooth connection to the mobile phone, and they're perfectly comfortable with things happening to and for them, but they don't necessarily gain any understanding of how these things happen. I think of them as "Customers of the Future."

There's a danger in creating any labeling system for people. It dehumanizes. It pigeonholes and silos. It creates friction points and us-versus-them scenarios. And it allows a manager to take an easy view of things and assume understanding of a person simply based on a label, which is dangerous ground. In my sysadmin generational theory, there's a lot of overlap and slop around the edges. It's simply a way of thinking about people's skills in order to help guide them, and nothing more.

## The Future of Sysadmin

As a manager, I look for traits in prospective employees that I see in myself: personal investment in the sysadmin profession, drive, motivation, curiosity, and a burning need to understand how something works behind the UI. I'm seeing less and less of that in younger applicants, and I'm concerned. I'm also growing as a manager and learning how to see different kinds of value in people.

As the manager, it's my job to understand the capabilities of my employees and play up the strengths while avoiding the weaknesses. My generational model helps me find the value in people who don't have the same mindset I do. I'm the manager, and organizing people of different skills and generations into effective and efficient teams is my job.

### A Tribute

Where do I fit and how did I get here? I'm a pure Gen-X "Explorer" sysadmin. I grew up with a Builder-type dad, who brought home what may have been the first personally owned computer in my hometown in 1980. He was never a computing professional, but he always kept the latest in our house and always made sure that we were growing up with technology at our fingertips. The timing was perfect, as the technology was raw enough that I needed to tinker to make anything work. Thanks to a good 10 years of my father's Boomer-style hobbyist obsession with computing, I was able to make an easy jump into an entry-level computing job, and then I took off and never slowed down.

This sidebar is a tribute to my father, Ray Seely, who died too young on December 17, 2014.