

*IN THIS WEEK'S ISSUE: So You Want To Be A Manager, Unblocking Projects, and Writing Tips For Engineers. Make sure you enable the images; the magazine looks a whole lot better that way!*



# PACKETPUSHERS

## Human Infrastructure Magazine

A Newsletter About a Life in Networking

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### Issue Number 23

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The "People are harder to deal with than technology" issue.

#### Thought For The Week:

"I love deadlines. I love the whooshing noise they make as they go by." - Douglas Adams

# 1. So You Want To Be A Manager

by Ethan Banks

As a younger engineer, I was frequently frustrated by co-workers or managers who had control, but lacked my technical ability.

At that time, I equated knowledge with responsibility. I felt that if I knew intimately how something worked, I should be the one in charge. I should have control. From some of the frustrated e-mails we get at Packet Pushers, I know others identify with this.

And so it was as a young man that I aspired to be a manager. Management looked like control to me. After all, I worked for a manager. That manager told me what to do, and I did it. That's a simplification of the relationship, but at the root of it, there it was.

And I thought that as I acquired technical expertise in operating systems, security, and networking, I should be the one holding the reins. Since I knew how the systems actually worked, and even understood how they worked together, I should be the one telling everyone else what to be doing.

That's logical, perhaps. But it's naive. Management is not engineering. Management is not technical leadership, at least not by default. Management is a skill that, like anything else, must be learned. A good IT manager...

- Is experienced with people
- Understands how businesses operate

- Can translate business needs to technical requirements
- Communicates those technical requirements to engineering

That's really what you're signing up for when you want to be a manager. Managing people, especially hard-headed technical people, is an extraordinarily challenging job. Being a rock star in the data center doesn't make you a rock star in the office.

Let's say you choose not to salute my cautionary flag. You believe in your heart of hearts that if you were in charge, things would be better.

Maybe you're right, but consider this. If you are granted managerial responsibility, you still have to do the engineering job you've always done.

Each time I've been a manager with direct reports, I've still had to perform engineering duties. And that's true whether I, in my ignorance, pushed to be a manager, or whether the manager title was hung on me against my will. Doing both is no fun.

Engineers think management is no big deal, and trivialize the workload. Don't make this mistake.

If influence is really what you're after, you don't want the manager role. You want a technical leadership role.

A technical lead with no direct reports allows you to be the excellent engineer you've trained so hard to be, while avoiding the burden of business meetings, budgets, reviews, executive interaction, and (to some degree) project management.

A technical lead role means that you can focus on design, engineering, collaboration, and research. You can recommend strategies to your manager, who then deals with the business end of things...like getting the solution paid for.

At this point, I feel a disturbance in the Force, as if a thousand readers are saying, "But if I don't become a manager, I'll never get paid more money!"

Depending on your employer, that might be true. But folks, it's a trap. If money is your only reason for accepting a management proposition, it's the wrong reason. You'll be unhappy, and the extra money won't make up the difference.

If you take on a manager role successfully, you'll focus on management. Again, don't confuse IT management with engineering. Yes, if you were previously an engineer, that knowledge and experience will come through as a manager. Doing both at the same time is, at best, difficult. Be careful what you wish for.



# 2. How To Unblock Your Project

by John Harrington

When I'm working on a project, I often need some help from peers to keep it moving, such as firewall engineer to add rules, a technician to run a cable, or a sysadmin to add a DNS entry.

But sometimes my requests are met with a flat refusal. Not only is this annoying, it means another hurdle to jump to complete the project.

Getting the assistance of my peers can be as difficult as the technical tasks, so when I'm blocked by a peer, I use a couple of techniques to restart the process.

First, I pick up the phone. Most of the time the person who refused didn't understand my request, or assumed it was more complex than it is. A quick conversation can clear up misconceptions. You can try this over email, but I always phone as it gives my peer less wiggle room and shows the task is important.

Second, I explain what I'm trying to achieve and the consequences if we don't deliver on time. Sometimes my peer can suggest a quicker or simpler solution.

If they still can't help, I ask if there's anything I can do to make the task more achievable. I'll often break down a request into parts that are urgent, and parts that can wait, and ask them to work on the urgent pieces.

If the person is simply overloaded, I prefer to push for a firm completion date rather than asking for favors, which I might not be able to repay.

If all else fails, I double-check the urgency of the project and its deadlines. This seems a little obvious, but I've been pressured by countless project managers to deliver a working network, only to find out that the downstream teams aren't ready to use it.

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# Sponsor: Riverbed

[Riverbed](#) works to ensure applications perform at their peak for more than 26,000 companies. It offers a platform for providing end-to-end visibility, optimization, and control across an entire enterprise. You get visibility to see everything that impacts the performance of any app – code, network, user experience – so you can detect and fix issues instantly.

Riverbed accelerates delivery of any app regardless of distance, and steers apps over the best network for maximum performance and lowest TCO. Riverbed simplifies hybrid IT operations while securing all applications and data to minimize risk and ensure business continuity.

Your work, your business, your productivity—they all depend on the performance of your applications. Let Riverbed, the Application Performance Company™, accelerate your software-driven enterprise. To get more information, listen to the Packet Pushers podcast “[Exploring Riverbed SD-WAN And Project Tiger.](#)”

## Branch Zero <sup>V</sup> IT

- ✓ No servers. No storage. No backup.
- ✓ Instant provisioning. Instant recovery.
- ✓ Complete data security. Full visibility.
- ✓ Apps that simply work.

# 3. Writing Tips For Engineers

by Drew Conry-Murray

Writing clearly and succinctly takes effort and practice. The following tips come from years of working with smart people who have deep technical knowledge, but still need a little help when they put pen to paper (or fingers to keys).

You can apply these tips to all kinds of writing: blogs, reports, email and other business communications, or that cyberpunk novel in a secret folder on your laptop.

## 1. Use Strong Verbs

Strong verbs energize a sentence and reduce the number of words you need to use, which makes for clean, clear writing.

Writers often weaken their sentences by adding helping verbs such as 'can,' 'does,' and forms of 'to be.' Helping verbs are sometimes necessary for particular tenses, but if you don't need them, cut them out.

Writers also often use the noun form of a verb, when they could just use the verb. For example:

Weak: When you *do a configuration* on a switch...

Strong: When you *configure* a switch...

## 2. Get To The Point

Put your most important idea at the very beginning of your writing. A blog or report isn't a mystery novel; you don't need to save up the good stuff for the end. In fact, your readers will appreciate your writing if you put essential information up front.

I think people violate this principle because they need to warm up to their subject. For instance, I've noticed tech bloggers sometimes start a post by rehearsing the history of the Internet. Please don't.

Instead, think about the most important point you're trying to make, and then write that as your first or second sentence. You can support that point, make other points, and add context later on in the piece, but those opening sentences must give readers a clear sense of what they're about to invest their time in.

### **3. Let It Sit**

When you've finished a draft, set it aside for awhile. Even twenty or thirty minutes can create enough mental space so you can re-read the draft with a cool eye.

That coolness makes it easier to spot clumsy sentences, weak logic, jokes that fall flat, and grammar and spelling mistakes.

It also helps with tip #2. If you re-read your draft and find that you've spent the first three paragraphs on DARPA, BBN, and Xerox PARC (or some other warm-up subject), you can delete those paragraphs and come out with a leaner, stronger work.

The Packet Pushers community is full of writers, so if you have tips that work for you, send them to [drew.conrymurray@packetpushers.net](mailto:drew.conrymurray@packetpushers.net) and I'll put them together, with proper attribution, in a post on PacketPushers.net.





## Sponsor: Interop

[Interop](#) is the leading independent IT conference, and the Packet Pushers are putting together a two-day “Future of Networking Summit” for Interop Las Vegas 2016.

The goal of this summit is to identify current and emerging technologies that are going to affect the networking industry over the next 5 to 10 years.

Experts, practitioners, and of course the Packet Pushers themselves will talk about the changing state of network operations, advances in network hardware and silicon, open networking, SD-WAN, containers and more.

Besides the Future of Networking Summit, Interop is assembling a full slate of independent, top-notch content on security, virtualization, IT leadership, SDN and more.

Make your plans now to join us at Interop Las Vegas, May 2nd through the 6th, at Mandalay Bay. Use the code **PPUSHERS** [when you register](#) and get 25% off 5-Day, 3-Day, and 2-Day conference passes.



## Internets Of Interest

A collection of pre-loved links that might interest you. "Pre-loved" because I liked them enough to put into this newsletter. It's not *true* love.

### What's The TCO For An OpenStack Cloud?

The folks at Red Hat put together a detailed TCO report that broke down the costs of running a private cloud. Their models determined that a private cloud running a commercially supported OpenStack instance was cheaper than running a plain vanilla OpenStack. And you probably won't be surprised to learn that OpenStack was cheaper than competing private-cloud software from unnamed commercial vendors.

The TCO model also found that cost savings went up when you added a Cloud Management Platform (CMP) alongside OpenStack, because the automation, orchestration, and self-service components of the CMP enable you to grow the cloud without having to grow your staff at the same rate.

It's a long, detailed post, but if you're costing out a private cloud investment, it's very well worth your time.

From **Red Hat**:

*"All of the costs of a dedicated team running the cloud: the salaries, hiring, training, loaded costs, benefits, raises, etc., regardless of the underlying technology, are a large chunk of the total costs. With a commercially supported OpenStack distribution, you only need to support the operations of your cloud, rather than the software engineers, QA team, etc.,"*

[LINK](#)

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## **Dr. NMS: Or How Facebook Learned to Stop Worrying and Love the Network**

This is the PDF of a presentation from several network engineers at Facebook that outlines how the global social media giant uses automation to keep the network healthy.

The slides are full of interesting tidbits, including how 99.6% of network alarms are automatically resolved, and how its sends approximately 1,100 notifications to carriers every 30 days.

Obviously, Facebook is a unique case, and it's not clear just how much your average organization could take away from these lessons, but the presentation offers an intriguing glimpse into the inner workings of a massive operational environment.

[LINK](#)

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## **A Bitcoin Believer's Crisis Of Faith**

This article from the NY Times provides a succinct overview of the recent kerfuffle within the Bitcoin community that led to competing forks of the cryptocurrency software.

The most significant point I took away from the article is that human emotions and conflicts are exceedingly difficult to separate from dispassionate technology.

From the **New York Times**:

*"The divide has led over the last six months to death threats against Bitcoin developers and hacking attacks that have taken down Internet providers. The sense of betrayal is strong on both sides."*

[LINK](#)

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## **“123456” and “password” Once Again Top Annual Worst Passwords Ranking**

Despite years and years and years of warnings, some people are still using really bad passwords. Yes, I know passwords and password management are a pain, but it seems ridiculous that '123456' and 'password' have been the most commonly used for **five years running**.

Do we have to make it that easy for intruders?

From **Tripwire**:

*“123456” and “password” have claimed the top two positions since 2011. The other top combinations, such as “12345678,” “qwerty,” “12345,” and “123456789,” either experienced no change from last year or showed only slight movement up or down.*

[LINK](#)





# PACKET PUSHERS

## Priority Queue

Where Too Much Networking  
Would **NEVER** Be Enough

[This channel](#) has our nerdiest shows  
on data networking technologies and  
products.

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# The Network Break



[Network Break](#) is a weekly podcast  
that delivers news & analysis on the  
networking industry in a fun, fast-  
paced style.

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## Research Papers

Research and deep technology papers that provide deep insight or  
expertise.

### Collaborative Overload

Harvard Business Review reports on the downsides of our increasingly  
collaborative workplaces. We all know email and meetings can be time-sucks,  
but the study also found that the most willing collaborators can, because they  
get drawn into so many projects, actually become a barrier to productivity.

In other words, if you find yourself constantly saying "Yes" to new work, there's  
evidence that it could be better for everyone to sometimes say "No."

From **Harvard Business Review**:

*"In most cases, 20% to 35% of value-added collaborations come from only 3% to 5% of employees. As people become known for being both capable and willing to help, they are drawn into projects and roles of growing importance. ... We find that what starts as a virtuous cycle soon turns vicious. Soon helpful employees become institutional bottlenecks: Work doesn't progress until they've weighed in. Worse, they are so overtaxed that they're no longer personally effective."*

[LINK](#)

## Product News

We don't often get new products worth talking about, so that makes it nice to have something to say.

### Arista Introduces Next Generation Arista EOS

Arista is announcing enhancements to EOS, the operating system that runs its hardware. New features include NetDB, a repository of network state that enables the collection of telemetry data for all Arista devices in real time; enhancements for moving workloads between private and public clouds; and support for Docker containers than run directly on EOS devices.

The NetDB enhancements are available now; the other features will be delivered some time in Q1 2016.

From **Arista**:

*"NetDB expands the network roles for Arista's spine platforms. With NetDB enhancements, EOS now supports in excess of 1 million routes and 100,000 tunnels for increased cloud scale. NetDB also provides the ability to aggregate the network state of all EOS devices to a common point through the CloudVision<sup>®</sup> platform and, from there, stream network-wide telemetry data to improve network operations visibility and historical analytics."*

[LINK](#)

## Recent Articles

The last five articles published on [EtherealMind](#)

### EtherealMind.com Latest

Logical Razors Can Take on Corporate Babble - [Link](#)

Canned Response to BGP Networking Questions – Reddit - [Link](#)

IETF RFC 8374 BGPsec Design Choices and Summary of Supporting Discussions - [Link](#)

Net Neutrality Hasn't Ended, We Don't Know When - [Link](#)

Next Market Transition ? Cheaper Buying, Less Selling - [Link](#)

## Watch This!

Where we collect some videos that make us reflect, think about our inner lives, or just entertain us.





Legos are awesome, but who knew they could act, too? This video recreates action-movie scenes from 2015 with Lego figures.



When I was a kid, the future meant jet packs. Now that I'm an adult, jet packs don't seem like they're going to happen. But driverless cars? That's getting more real.



Here's a cute little video of people experiencing Google's self-driving car for the first time.



## Link Propagation Newsletter

Our weekly newsletter delivering essential headlines, announcements, and useful news to your inbox

Can't get enough newsletters? Check out [Link Propagation](#), our newest publication. We send you a free weekly digest with tech news, interesting blogs, and industry announcements, all curated by the Packet Pushers. It's an easy way to keep up and stay informed. Subscribe at [packetpushers.net/link-propagation](http://packetpushers.net/link-propagation).

## Did We Miss Something?

Got an link or an article to share? Email it to [humaninfrastructure@packetpushers.net](mailto:humaninfrastructure@packetpushers.net)

### The End Bit

*Sponsorship and Advertising - Send an email to [humaninfrastructure@packetpushers.net](mailto:humaninfrastructure@packetpushers.net) for more information. You could reach 5,013 people.*

Human Infrastructure is bi-weekly newsletter with view, perspectives, and opinions. It is edited and published by Greg Ferro and Drew Conry-Murray from PacketPushers.net. If you'd like to contribute, email Drew at [drew.conrymurray@packetpushers.net](mailto:drew.conrymurray@packetpushers.net).

*We don't give away your email address or personal details because that would suck.*

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