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EtherealMind's Networking Truths

By Greg Ferro

I started writing this list sometime around 2004 as my own take on RFC1925 Networking Truths. There is much truth and humour in The [Twelve Networking Truths](#) but I felt that my experience as an engineer needed its own take and modernization.

Over the last 15 years or so, I have been collating, refining, and updating my own rules for network engineers that embrace both technology and professional matters based on my experiences in the corporate life and Enterprise IT.

Last updated: 20181205

1.It's usually something simple. Check the physical first. Cabling, RF, or power is the most likely cause of network problems. When you have received a lot of training, and spend a lot of time studying fancy networking, there is a tendency to look for the fancy solution. The

sign of someone who, absolutely, truly knows what they are doing is that they can work out the simple things, *as well* as the complicated things.

2. We don't know if the network is working. Tools for network visibility, monitoring, and analytics are not widely deployed and often based on really poor technology. (Note: This *might* be changing)

3. There is never one right way, answer or choice. It depends. Your experience will vary, situations will vary, people do not always make logical or correct decisions.

4. Good, fast, cheap: choose any two. (The Law of PreSales)

4a: Anything free is worth what you pay for it and works better than people expect. Good/fast/cheap doesn't apply when something is free.

4b. If something is too good to be true, then it probably is.

5. A lack of failure is not proof of reliability. If it hasn't failed yet, statistically it is more likely to fail tomorrow.

6. Management incompetence and poor leadership is normal. Plan for it.

6a: A good project is one you walk away from. Finished is better than good.

7. Trust no default, trust no person, trust no hardware, trust no software. Then double check it. I call this the 'X-Files Principle', some people call it 'Murphy's Law'.

8. If it happens, it must be possible.

8a: If it's stupid but works, it isn't stupid

8b. Sometimes, stupid is still stupid.

8c. Just because I think it's stupid, doesn't mean it is.

9. The more crap you put up with, the more crap you are going to get. You make choices about your career. Take control.

10. If it isn't broken, don't fix it.

10a: A problem ignored is often a problem solved.

10b: Don't trust the user/telco/MSP/reseller to diagnose the problem. They know nothing and have little interest in working on your problems.

10c: When in doubt, go for it. It's better to have tried and failed than to have never tried at all. You cannot not make a choice.

11. When in doubt, blame the vendor/reseller/service provider. You will be right 95% of the time. You will still have to fix it.

12. If you are good, you will be assigned all the work. If you are really good, you will get out of it

13. Don't be irreplaceable. If you can't be replaced, you can't be promoted.

14. When a technology needs "improving", all of the dumb, cheap and easy options will be tried, discussed and implemented first. Hard things are hard, people are lazy and companies make dumb choices.

15. Following the rules will not get the job done.

15a: Getting the job done is no excuse for not following the rules.

Sponsor: Aviatrix

Ready to Migrate to the new AWS Transit Gateway? Learn how AWS and Aviatrix have collaborated to make transit networking better. And simpler.

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Join Nick Matthews, Principal Solutions Architect at AWS, Sherry Wei, CTO & Founder at Aviatrix, and Stuart Scott, AWS Training Lead at Cloud Academy for this webinar as they "unpack" the latest in AWS Transit Networking, and provide practical tips and considerations for planning a transit network or migrating from an existing, instance-based transit VPC. Watch this [on-demand webinar](#) or learn more [here](#).

The Importance Of Bedside Manner

By Ethan Banks

A troubleshooting ticket lands on your desk like a fish out of water, flopping about until you either gut it or throw it somewhere else.

When you open the ticket, it's loaded with helpful information like, "The Internet is down. Fix it now. I have to get payroll done. You want to get paid, don't you?"

Right. One key to effective troubleshooting is to recognize that you will almost never have all of the information you need in a problem description. Often, the information you are given will be wrong.

In our example, the Internet is certainly not down. If it were, you'd be awash in sweat, the doors of the IT department barely holding back the angry horde screaming for your demise. Nonetheless, the person who logged the ticket has some sort of a problem. How do you cut through the person's presumptuous description and get the information do you need to resolve the issue?

An Exact Understanding

You will need to talk to the person that logged the ticket. Your instinct might be to avoid all human contact, especially end users. I feel that. But there's no avoiding this step if you want to solve the problem as quickly and effectively as possible.

When chatting with the person, use a form of inquisition. No, not *that* inquisition.



As you ask your questions, be polite.

You need to find out what the person was trying to do that didn't work for them. Were they launching an application? Did they click on an icon that didn't work? Maybe they were using a Web browser. Was a site bookmarked? Can they share a failing URL with you? Did they get an error message? What did the error say, exactly? Can they send you a screenshot? Can they share their desktop with you while they recreate the problem?

The solution will only come if you, as a technologist, clearly grasp what's actually broken. You must ask questions the end user is able to answer to get to the root of the problem.

Bedside Manner

Some of you that chat with end users are just awful. Really. You think end users are dumb, and your contempt leaks out in sarcastic remarks and thinly veiled ridicule.

Shame on you. To get the information you need to solve the problem, you must not only ask questions they can answer, but also befriend them.

How do you do that? By letting them know you are there to help resolve the problem. You are their advocate. You empathize with their issue. This person should believe that you are on their side. That way, they won't mind the inquisition you'll have to go through with them to get to the truth.

End users aren't giving you bad information on purpose. Help them help you.

Take Good Notes

As the troubleshooting progresses, you'll eventually get a handle on what's going on. Take good notes on the exact problem and steps to resolve the problem. Include that write-up in the ticket, and maybe share it on the company's knowledge base.

That information will come in handy when your peers are trying to cut through another ambiguous ticket because the problem cropped up again.

All For One, One For All

If being the end user's friend or taking notes for the next person doesn't appeal to you, rethink your attitude about your company and employment.

You're all in it together. No matter what department they are in, your co-workers are fellow humans with a job to do. Just like you.

These are people worthy of help. Don't view others as moronic ticket generators or suckers who should have to figure it out the hard way like you did. Be the person you want others to be.

Sponsor: Virtual Design Clinic 3 - Holiday Change Freeze Edition

Join the Packet Pushers and a holiday assortment of guests for our third [Virtual Design Clinic](#) on December 19th.

This free, live, online event includes presentations on continuous integration/continuous testing for networks, network design for NVMe over Ethernet fabrics, and Ask Me Anything panels with network and design experts. You'll also hear from our sponsor, Apcela, on three steps to boost the ROI of SD-WAN.

If you can't join us live, we'll post all the videos and presentations on [Ignition](#), our membership site. You can also check out VDCs 1 and 2 there right now.

[Register here](#) and we'll see you December 19th.



Thanks, Internet!



SHARED BY KEVIN MYERS (@STUBAREA51)

Internets of Interest

The Paradox Of Choice - Azeria Labs

There's an extraordinary number of new skills, tools, and methodologies you could learn to stay current in the job you have now, or to skill up for a new position. But which skills, tools, etc., should you choose?

This post explores the psychological phenomena that affect what we choose and whether the path we take will be successful. This post is oriented around security skills, but the general principles apply to any IT discipline.

Azeria writes "I want to share some of my experiences and notes on managing "choice overload", becoming an efficient learner, and mastering a field. In particular, this mini-

series will answer three questions I hear a lot from people starting out in our industry: "Where do I start?" (Part 1 – The Paradox of Choice), "How can I become good at this topic quickly?" (Part 2 – The Power of Deliberate Practice) and "How can I finally master this field?" (part 3 – Mastery) ."

[LINK](#)

Hopeful with a Dash of Skepticism: Cisco 9800 Wireless Controllers - Network Phil

Cisco is rolling out new Wireless LAN Controllers in its 9300 and 9800 lines to converge wireless and wired management and enable policy enforcement at the edge instead of backhauling traffic to an enforcement point.

Phil Gervasi, who had some bad experiences with Cisco's previous efforts in this direction (the 5760), shares his perspective on Cisco's Network Field Day presentations of the 9800.

The quick takeaway: this might be worth getting in the lab.

[LINK](#)

The End Bit

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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.

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

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