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How I Would Improve Certifications As A Vendor

By Greg Ferro

Jeff From_A_Vendor sent me the following:

Question: We're about to start a cert program. What would be some suggestions for a certification program? What would you like to see?

It's an interesting idea to put myself in a vendor's shoes and consider how a corporation would design a certification program.

First, I wouldn't overcommit to the certification thing. As a vendor I would love certifications for building loyal customers and removing sales objections.

Certifications help to make money, lower sales costs, and reduce whiny customer noises. As a secondary effect, they reduce the cost of technical support.

That said, as a vendor executive, I would generally loathe having to actually deal with all those people that don't make or influence buying decisions. There is no money in those folks, they don't adopt the new products, and they are chaff in the selling process that waste my time.

As Jeff From_A_Vendor noted:

Over the years, when I conversed with VP-level execs in any networking vendor about certification, it's like I dropped a bag of week-old fish heads on the table. As I write this I'm getting a better understanding of why.

Let's Pretend I'm A Vendor

IMO, these are the vendor points of view on certifications:

1. Build loyal customers through confident operation and ownership; i.e *I need permission to accept that I know what I'm doing.*
2. Get customers to use key features that make a difference; i.e *Get them to use the features that justify buying more kit.*
3. Get customers to understand basic design principles that will be successful; i.e Keep it simple, stupid and don't do dumb stuff because people always do dumb stuff and then blame the vendor. And expect the TAC to fix it. (Did you know TAC is expensive?)
4. Get customers thinking about operations and what could go wrong; i.e Don't call the TAC for everything, gods, it's expensive to have a TAC and I don't actually want you to use it.
5. Help network engineer/operators get their next job by having a certification; i.e *Resume polishing.*
6. Prevent people who cannot self-learn from objecting to your product; i.e *It's your fault I'm too dumb to read the manual.*
7. Managers want to measure learning objectives for team members; i.e *Just make this go away, I have no idea what a network is.*
8. Build loyalty through commitment; i.e I've passed these exams/certs and I'm too lazy to learn something new.

How I Would Build A Program

I would probably structure the course starting with ~50% on basics and core knowledge then ~50% on product/vendor specifics.

The basics don't change much, so you reduce the cost of maintaining the content over time.

Have an online pre-requisite self-learning module or competency test so that people can detect if they are incompetent (aka you have to be this high to get on the ride).

If people (idiots) turn up, it's not your fault they were idiots. Yes, people might/will cheat this pre-test or not bother at all, but that is not the point. You are transferring responsibility to candidate.

It doesn't much matter what you put in the certification. The real world is completely different, every customer has their own idea, and resellers make fairy tale promises. Very few people really know what they are doing. So I would focus on reducing the

most common customer complaints and preventing the most stupid designs to reduce TAC calls because the TAC is expensive.

Got any more ideas?

Tech Blogs: How To

Infrapedia - Global Internet Network, Datacenter and Infrastructure Atlas - Network Atlas

<https://live.networkatlas.com/>

A somewhat dynamic map of undersea and overland trunk cables. Useful if you are having a certain sort of argument with your incompetent telco that wants to make stuff up so that you will go away and stop bothering them. - Greg

Ansible Vault: A Primer - Network-to-Code Blog

<https://www.networktocode.com/blog/post/ansible-vault-primer/>

Stop storing secrets in plaintext files (or in your source code!), everyone. Bryan Culver demonstrates how to use Ansible Vault to make your automated world a safer place. "Ansible Vault is an Ansible feature that allows the secure storing and use of sensitive data. Once encrypted, secrets can be safely distributed or tracked in source control without concern for exposure." - Ethan

Demystifying Containers Series - SUSE Blog

<https://www.suse.com/c/demystifying-containers-part-i-kernel-space/>

<https://www.suse.com/c/demystifying-containers-part-ii-container-runtimes/>

I haven't yet made it through these monster posts, packed with information about containers. What I have read so far has been good. Note--these are NOT casual, top-of-mind blog posts. These are thoughtful pieces that teach in progressive blocks supported by accessible diagrams and command-line output. Namespaces, cgroups, runc, CRI, and more. [Sascha Grunert](#) FTW. - Ethan

A (Proxy) Minion-less Approach to Network Automation using Salt - Mircea Ulinic

<https://mirceaulinic.net/2019-06-17-minionless-salt-automation/>

Salt uses minions to manage devices. What about legacy network devices, where it's impossible to install a minion? The solution has been proxy minions that can talk to Salt on the one side and to network devices via SSH or APIs like NETCONF on the other side. The catch? For every network device requiring a proxy minion, you must

spin up a unique instance. Yuck. But Mircea has created a solution--[the salt-sproxy package](#)! He goes on to explain salt-sproxy's use in detail. - Ethan

Automation Workflow Patterns - IP Engineer

<http://ipengineer.net/2019/06/automation-workflow-patterns/>

David Gee analyzes workflow patterns. That is, when an event happens, what other events might be triggered, and in what way? And how can automation effectively handle these workflows? David underscores the complexity of workflows in networks, and considers how much automation is appropriate. If you build overly complex automation, it could be a house of cards. "One process can absolutely setup trigger conditions for another, but do you want to troubleshoot this at 3am? I certainly do not." Neither do I. - Ethan

Tech Blogs: Opinion

Anycast DNS — Resilient Scalability for Critical Network Infrastructure Software, Part 1 - Medium

<https://medium.com/@tom.bowles/anycast-dns-part-1-...>

Tom Bowles provides a concise overview of how Anycast for DNS works, and explores the benefits. This is part one of a two-part post. Part two, which is linked at the bottom of the first post, gets into implementation details. - Drew

We Are On A Break - IP Space

<https://blog.ipspace.net/2019/06/we-are-on-break.h...>

If Ivan Pepelnjak can take a vacation, so can you. He advises "...try to get away from work (hint: automating stuff sometimes helps ;), turn off the Internet, and enjoy a few days in your favorite spot with your loved ones!" Good advice. - Drew

New tech era, new skills, new mindset - toolr

<https://toolr.io/2019/06/27/new-tech-era-new-skills-new-mindset/>

Nicola Arnoldi shares his strategy for keeping up with too much technology coming on too fast. My favorite bit is where Nicola asks, "Which technologies do I focus on?" His paraphrased answer? "I use three criteria to come up with a list of topics that I devote most of my education time to--passion, business relevance, and career relevance." Yep, nailed it. - Ethan

My First Tech Job Experience - Network Phil

<https://networkphil.com/2019/06/25/my-first-tech-job-experience/>

Phil shares a story about his first tech job, his attempt to move into a junior network engineer role at that same company, and what he ultimately had to do to advance his

career (and get health insurance for his family). Phil didn't leave a concluding thought, but I will. No one cares about your career as much as you do. Now go read Phil's post.



- Ethan

Cranky Old Network Engineer Complains About The Youth Of Today - Moving Packets

<http://movingpackets.net/2019/06/20/cranky-old-network-engineer-complains-about-the-youth-of-today/>

John Herbert complains about a lack of fundamental understanding of routing, interfaces types, and administrative distance. What is it that confuses aspiring networkers about how a router behaves in the face of a connected interface? Is it poor education? Is it a lack of experience? John opines. Includes a “Totally High Quality Network Diagram.” 🤔 - Ethan

History of Networking Page - Rule 11 Reader

<https://rule11.tech/history-of-networking-page/>

<https://rule11.tech/history-of-networking/>

Russ White has created an archive page for all of the History Of Networking podcast episodes that have been produced thus far. Russ reports, “I have a long list of guests still to schedule, so the new page will be updated as new episodes are recorded and released.” The latest episode is on [the history of ATM](#). - Ethan

The Lulz



Jemele Hill



@jemelehill • 10/31/18



PER MY LAST EMAIL

IT News

Amazon Ring Will Survive the Anti-Surveillance Backlash - The Atlantic

<https://www.theatlantic.com/technology/archive/2019/06/police-offer-amazon-ring-free-exchange-access/592243/>

Fifty police departments are working with Amazon to get access to surveillance video generated by Ring doorbells. At the same time, Amazon is looking to expand its line of video cameras to operate on cars, eye glasses, and drones. I shared a link last week about the notion of “ambient privacy” https://idlewords.com/2019/06/the_new_wilderness.htm and how it’s being lost. We’re building a strange conglomeration of corporate, government, and individual surveillance infrastructures, presumably in the name of safety, but at what cost? - Drew

TOC Approves CNCF SIGs and Creates Security and Storage SIGs - CNCF Blog

<https://www.cncf.io/blog/2019/06/24/toc-approves-cncf-sigs-and-creates-security-and-storage-sigs/>

Decoding the acronyms reveals that the Technical Oversight Committee of the Cloud Native Computing Foundation has approved the creation of Special Interest Groups. This is a ground floor opportunity. “CNCF SIGs are currently being bootstrapped in various focus areas and primarily led by recognized experts and supported by contributors. They report directly to the TOC and we encourage developers and end users to get involved in the formation.” Read the piece to find out the various SIGs firing up. - Ethan

What We Want Doesn’t Always Make Us Happy - Bloomberg

<https://www.bloomberg.com/opinion/articles/2019-05-01/what-we-want-doesn-t-always-make-us-happy>

“There’s no clear consensus on how to measure happiness. Some neuroscientists have tried to link it to various measures of brain activity. But economists tend to use a method that’s a lot cheaper and quicker — they send out surveys and questionnaires asking people how happy they are. Happiness research has led to some surprising and troubling discoveries. People seem to reliably seek out a few things that make them unhappy.” This short piece further summarizes the findings of [this academic paper](#). For example, “The people who deactivated Facebook as part of the experiment were happier afterward, reporting higher levels of life satisfaction and lower levels of depression and anxiety.” Indeed. - Ethan

One Bad App(le) Spoils The Barrel - Network Computing

<https://www.networkcomputing.com/network-security/one-bad-apple-spoils-barrel>

Lori MacVittie, writing at Network Computing, reminds us that in an age of pervasive connectivity, it's not enough to focus security and segmentation efforts on the most risky or business-critical apps. She cites the fish tank hack, in which intruders used a network-connected temperature sensor in a casino aquarium as a jumping-off point to the casino's internal network. "A single app is a risk. The connective tissue known as the network that spans data centers, clouds, and even remote and branch offices today enables even the most irrelevant app to become a potential point of attack." - Drew

Industry Takes & New Products

Want a podcast to keep up with vendors announcements? Want the Packet Pushers to curate so that you only have to listen to the stuff we think is interesting? Try [Briefings In Brief](#). BiB features 5 minute summaries of vendor briefings and 15 minute Tech Bytes.

Tech Bytes are sponsored and often feature a customer chatting with us about a product you might want to use. Sample a few [BiB episodes here](#), and if you like it, subscribe. - Ethan

Nubeva Prisms TLS (SSL) Decrypt Solution Now Supports New Amazon Virtual Private Cloud Traffic Mirroring - Nubeva

https://www.nubeva.com/press-release/decrypt_aws_m...

Nubeva Prisms is a cloud-based packet broker. You can deploy Prisms in public clouds such as AWS to redirect packets to processing tools to get packet-level visibility into your cloud services. Now Prisms can decrypt TLS traffic in Amazon VPCs to ensure you can still perform security and monitoring inspections on traffic. - Drew

RFC 8595: An MPLS-Based Forwarding Plane for Service Function Chaining - IETF New RFCs Feed

<https://www.rfc-editor.org/info/rfc8595>

This document describes how Service Function Chaining (SFC) can be achieved in an MPLS network by means of a logical representation of the Network Service Header (NSH) in an MPLS label stack. That is, the NSH is not used, but the fields of the NSH are mapped to fields in the MPLS label stack." It's not apparent to me what functionality we'd get with this NSH-translation approach that we don't get with segment routing. Could be I'm missing something important. OTOH, the IETF is known to promote multiple competing standards in the interest of fairness. - Ethan

VyOS Project 2019 - June update - VyOS Blog

<https://blog.vyos.io/vyos-project-2019-june-update>

Lots of motion for the open source network operating system, VyOS. News includes migration of the doc system to ReadTheDocs, an HTTP API now available in the nightly

builds, pre-boot script enhancements, bug fixes, and roadmap features (including MPLS!). - Ethan

Kubernetes 1.15: Extensibility and Continuous Improvement - Kubernetes Blog

<https://kubernetes.io/blog/2019/06/19/kubernetes-1...>

“We’re pleased to announce the delivery of Kubernetes 1.15, our second release of 2019! Kubernetes 1.15 consists of 25 enhancements: 2 moving to stable, 13 in beta, and 10 in alpha. The main themes of this release are [continuous improvement and extensibility].” Note as with previous releases, Kubernetes 1.15 includes a large number of alpha features. This is probably the version to run in your lab, not in production. At least, that’s what “alpha” means to me. - Ethan

Veritas Abstracts IT Complexity With New Enterprise Data Services Platform - Veritas Newsroom

<https://www.veritas.com/news-releases/2019-06-20-v...>

Veritas has released version 8.2 of NetBackup. I found [this blog](#) that goes deeper than the official press release and includes a 3 minute video. The big deal here? “With NetBackup 8.2, organizations can now recover NetBackup images directly in object stores such as Amazon Simple Storage Service (Amazon S3).” - Ethan

Oracle Dyn’s DNS, Web Application Security and Email Delivery Services Now Fully Integrated with Oracle Cloud Infrastructure Edge Services - Oracle Blog

<https://blogs.oracle.com/cloud-platform/dyn-upgrad...>

Dyn and Zenedge services have been integrated into Oracle Cloud Infrastructure. If you’re an existing customer of Dyn or Zenedge, that means you probably have some homework to do. “To facilitate your transition, we have provided self-service tools and instructions to upgrade services from the first-generation platform to Oracle Cloud Infrastructure [here](#) and there are additional support resources available to assist customers and partners.” I sense Oracle’s statistics on their cloud infrastructure consumption are about to go up! - Ethan

Share A Tech Tip

We've got a newsletter, you've got a tech tip. Let's get together! What do we mean by a tech tip? It could be:

1. A useful little script
2. A favorite tcpdump command line parameter

3. Screenshot of an underappreciated feature in a GUI for some networking tool
4. A link to, and brief explanation of, a neat open source tool
5. Something else

If you've got something you'd like to share in this newsletter, drop me a line at drew@packetpushers.net. If we like it, and it's suitable for a newsletter format, we'll publish it in an upcoming issue (giving you all due credit, of course). Then you can sit back and bathe in the adulation that's sure* to follow.

*Adulation not guaranteed

The End Bit

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Human Infrastructure is a weekly newsletter with views, 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.

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