How much does it cost to SELL Enterprise gear ? Why use ad-blocking tools ? Common Language in Multi-Lingual Companies. Learnings from DellWorld 2015. Links to interesting things. Sponsored by Talari and Viptela.

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The "Too many things to do, not enough focus to do them" Edition

Thought For The Week:
A good project is one that you walk away from.

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Thoughts: Cost of Buying Enterprise Products

How much does it cost for a vendor company to acquire a new customer ?

Wikipedia:

> Customer Acquisition Cost is the cost associated in convincing a customer to buy a product/service. This cost is incurred by the organization to convince a potential customer. This cost is inclusive of the product cost as well as the cost involved in research, marketing, and accessibility costs. This is an important business metric. It plays a major role in calculating the value of the customer to the company and the resulting return on investment (ROI) of acquisition. The calculation of customer valuation helps a company decide how much of its resources can be profitably spent on a particular customer. In general terms, it helps to decide the worth of the customer to the company. - [Customer acquisition cost - Wikipedia, the free encyclopedia](#)

This report on Imperva surprised me with how much they think costs to acquire a single customer:

> Customer acquisition costs were around $137k in 2014 which is 21% higher than the year before. [Imperva: Need To Optimize Operating Expenses - Imperva (NYSE:IMPV) | Seeking Alpha](#)

Holy cow, $137000 per customer ?

> Marketing expenses as a percentage of revenue increased from 51.33% in 2014 to 64.86%.

Speechless. More than two thirds of revenue is spent on marketing.

Then a Second Thought: How Much Does It Cost To KEEP A Customer

Once a customer is acquired, how much does it cost to keep them ? Sales people, pre-sales engineers, product experts and internal sales for quotation/pricing. Managers and Execs to keep all that running.

Public cloud can be cheaper (& easier) because you don't waste time with humans negotiating complex deals. The customer acquisition is vastly less when everything is presented on a web page and customers

Is It Too Hard to Buy Enterprise Products ?

So now I'm thinking is it too hard to buy enterprise products ? Here are some questions that come to mind:

- Why do I need experts in **_licensing_** of things ?
- Why do I need to speak to sales people, pre-sales engineers, subject matter experts for every single product even when its a simple one-off purchase ?
- Are these products actually so complex that a human-human interaction is necessary to exchange information ?
- Why does my final price vary according to how much time I invest in "working" the sales rep to "cut a deal" ?
- I have spent a large percentage of my career negotiating "deals", working out the difference between different product families and determining which features. Did this deliver any value to the customer ?
- If vendor spent time considering design of "buying products", could it be easier and cheaper to buy ?

A personal story: I once worked on a project that was upgrading Cisco Nexus 7000 switches and spent over 250 hours of my site time working out the software and hardware path and getting validation. This doesn't include time of project managers and execs who attended meetings. Thats about six full time work weeks over sixteen weeks elapsed time (yes, four months). In addition, the reseller spent at least 100 hours and we estimated that the vendor resources added up to another 200 hours in sales and engineering time. Total purchase value was less than £500K for a few line cards.

This story is by no means unique but it was one of the longest pieces of pointless work I've done. It was soul destroying, tedious and boring to sit

through meeting after meeting, call after call from teams of experts until we got the firm & final answer.

Reducing the Cost of Buying

Can we reduce the cost of buying ? Here are some things:

1. You can move to the public cloud where the cost of buying is substantially less (and cost of operation is higher)
2. Calculate the cost of buying as a holistic variable in your architecture/design. If the vendor/reseller wants to send a sales rep for every purchase then add something to project cost for "buying time"
3. Buy products that have simple price lists.
4. Avoid products that elevator licensing for feature sets - avoid time spent working on feature sets.

Any others ? Lets me know by email

Why I Use Ad-blocking Software

I use ad-blocking software. I don't like using ad-blocking software because many websites (including mine) derive income from displaying banners ads. But everywhere I look at the business of ad-blocking, the incentives for ad networks are all wrong and has created a huge problem.

Here is why I use an ad-blocker although I don't want to :

1. **Security** - there is a substantial amount of drive-by malware being injected from ad networks. Ad networks have zero incentive to solve the problem since the malware authors pay them. Ad networks have failed to this seriously and happy to be paid to deliver malware to my computer. Money first, audience later is a wrong incentive.
2. **Privacy** - the ad networks are building up a stunning amount of personal data about you. And none of it is regulated, controlled or even hampered by moral values by the people who "own" it (which isn't you). They sell your data (not just ads) in real-time markets to the highest biider. More

data = more money. *Wrong incentive* - neither ad networks or content providers have a reason to care about my personal desire for privacy or the society we live in. Indeed, they are rewarded for

3. **Bandwidth** - mobile bandwidth is expensive and I am paying for it. (again, wrong incentive - ad networks don't care about my costs, nor do content providers. Wasting my bandwidth is their good luck.)
4. **Experience** - I want a simple user experience. But ad companies have escalated their efforts to get noticed to preposterous levels - autoplay videos, popover, popunder, display on scroll and so on. My outbound firewall has over a hundred media companies domains that I will no longer
5. **Ad-Networks Had Their Chance**. it was just a 2 year ago that the [Do Not Track](#) initiative was ignored by the ad-networks. Instead of letting a few people opt-out who cared about their privacy, the situation has escalated to a crisis situation where consumbers have reaching breaking point.

Bad Incentives

Venture capital funding is driven by short term returns and heavily "invested" into this technology in 2009/2010 and today they are more than ready to pull the plug on many of these companies. They are taking too long to make big money and so they were driven to extremes to grow revenue as fast as possible.

Sponsor: Viptela - Live in New York

Its back. Ethan & Greg will be in New York on 4th November to record a live weekly podcast sponsored by Viptela.

About Viptela Technology

Viptela's hybrid SDWAN technology unifies disparate MPLS and Internet-based WAN infrastructure; packaged with centralized administration, real-time visibility, and policy-control for deterministic application performance.
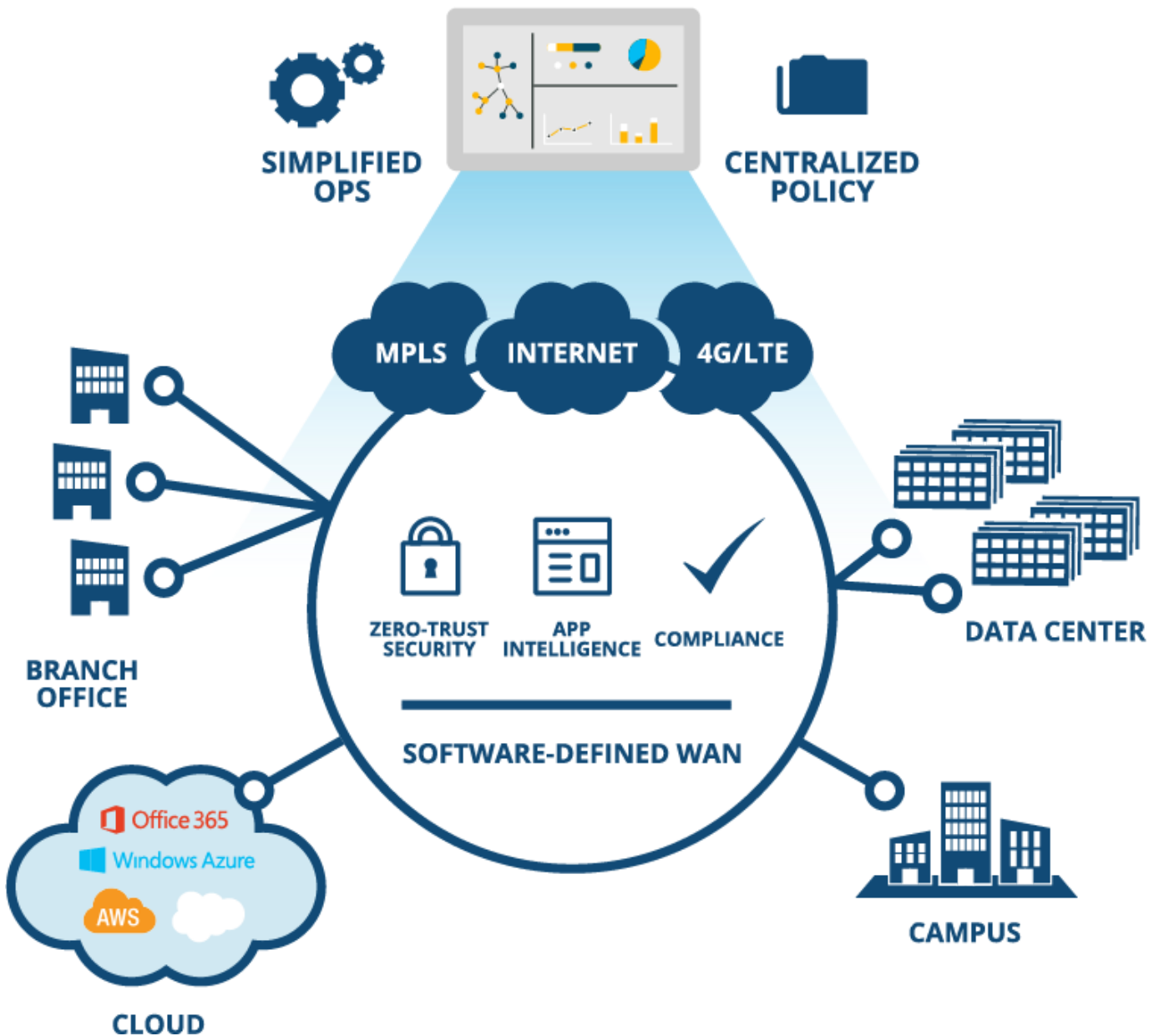
# Insights: Dell & The Internet of Things

The Internet of Things (IoT) is a complicated area of research because its hard to tell how that market will develop. Equally, judging its impact on networking is hard but I try to keep an eye on events and announcements in the hope that I will understand something.

Last week, I was a guest at Dellworld and the Dell Edge Gateway 5000 Series was announced for IoT. This is a hardware networking appliance designed specifically for IoT applications. This is a new type of networking device and possibly so different that it isn't actually a network device at all. From the announcement

1. Hardware solution for ISVs to build software onto (like Dell PCs use Windows)
2. Unusual interfaces - *"legacy serial connections (RS-422/485, CAN bus) and modern wireless networks (Wi-Fi, 802.15.4 mesh) to the internet with expansion capability for future options"*
3. Modern security features *"Security foundation including TPM, secure boot and BIOS level lockdown of I/O ports"*

This product challenges my view that a router would have IoT functions added to it. I could imagine that a new module in a Cisco 3800 series or a new Cisco product in the industrial networking range that runs IOS. But Dell has produced a hardware platform to run Linux or Windows and partnering with application developers for solutions.

This chart is an infographic from IBM and how they hope IoT will grow

THE INTERNET OF THINGS

AN EXPLOSION OF CONNECTED POSSIBILITY
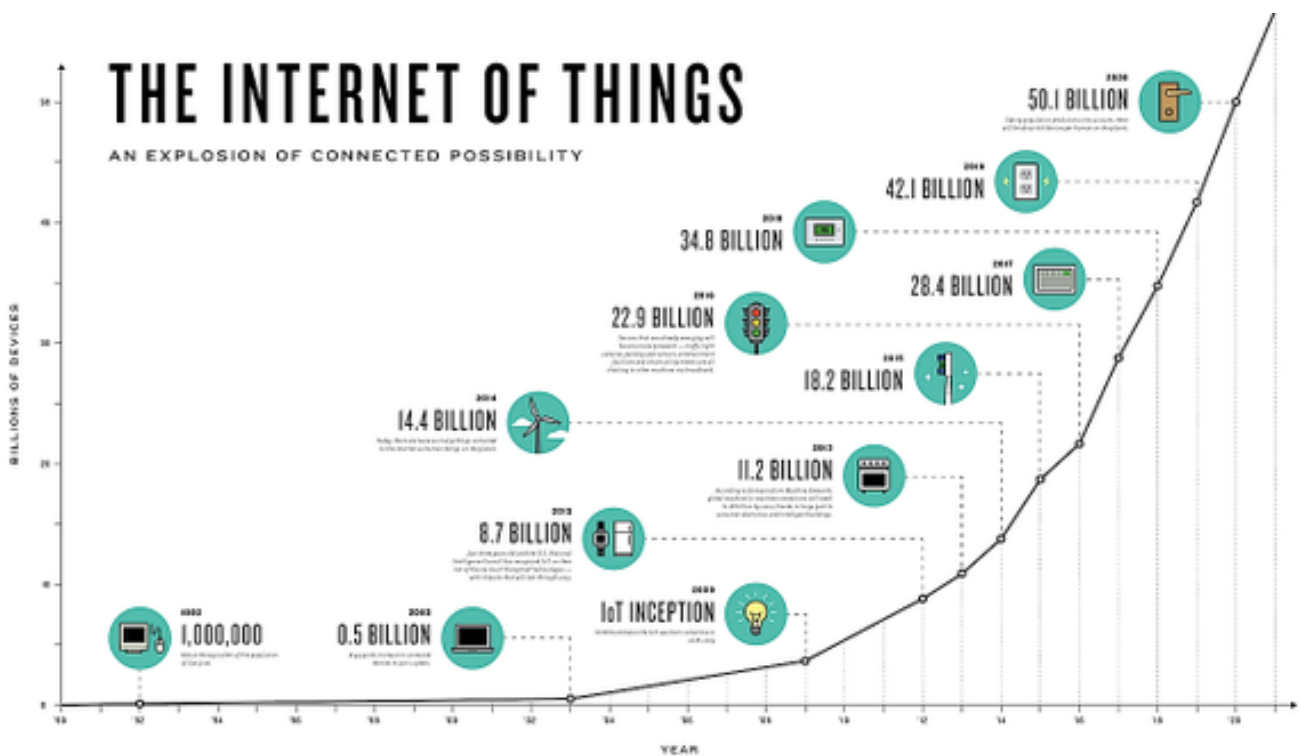
I have been reading a lot of research into IoT and very little seems certain or sure. Its too early for solutions and applications to coalesce around a single technology or solution. It strikes me that the market is so huge that we are unlikely to see any company achieve market dominance. Too many niches, too many possibilities and too many use cases. Retail, consumer, industrial, commercial are markets.

Learned at Dell World: Open Networking

What I learned from my time DellWorld is that Dell is bringing different solutions to market from the ones that we buy today. I recorded a podcast with Tom Burns, VP & General Mgr of Networking on their open networking strategy. Instead of making closed systems with the hardware and software integrated, Dell Networking has chosen to open their hardware and ecosystem to partners such as Cumulus Networks, Big Switch and IPInfusion as well as Dell's own FTOS.

For customers, they can buy a Dell ON network switch and run their choice of

operating system. Choose to run Big Switch's Big Fabric SDN today but tomorrow you can buy a software license and install FTOS to get the traditional networking features like MLAG, STP, LACP and L3 Routing.

I think that is a whole new way to look at network design and vendor selection.

The podcast will publish on the Priority Queue Channel in November sometime. [Subscribe info is here](#)

Sites to See: Internets Of Interest

Chuck Robbins Talks About Cisco's business future.

Cisco has (finally?) started telling investors that hardware is not the long term future of the company:

> "In his first big public statement since he took the helm in July, Charles H. Robbins said Cisco would move away from selling individual switches and routers — the plumbing of the Internet and other modern communications systems.

This has been obvious for some time as SDN changes the way that data flows in the data centre LAN and, increasingly in the WAN. And NFV signals the end of hardware-based firewalls, IPS/IDS etc. Certainly there won't be growth in the sales of hardware appliances in the next two years.

> He also said Wall Street would need to start seeing Cisco in new ways, as it moves to revenue models closer to those of cloud-computing companies like Salesforce.com, with lots of revenue based on subscriptions.

A darling of investors during the dot-com boom, Cisco shares have put in a lackluster performance. Yet 80 percent of the world's Internet traffic passes through Cisco machinery.

"We believe we can manage them," Mr. Robbins said of the analysts covering his stock, adding that it was unclear what "the end state" would look like as businesses like collaboration and security increasingly move to subscriptions, and traditional hardware is sold by the piece.

I can't help feeling a sense of dread that software licensing is going to get worse not better. Cisco's has a major push around operating software licenses but we still have crazy productisation issues with too many licenses and lack of data on what they cover.

[Cisco's New C.E.O. Envisions Big Changes - The New York Times](#)

Europe Rules That Europe High Court Strikes Down Data Sharing Laws

US companies have been permitted to store data about European citizens in the US and under US jurisdiction under an agreement known Safe Harbor and this agreement has been ruled invalid. The most likely outcome is that all companies will be required to store data about European citizens physically in the European Union.

This is probably bad for data centres and cloud hosting outside of Europe, and good news for local companies, resellers etc who now have a chance to build their own clouds to compete.

[Data Transfer Pact Between U.S. and Europe Is Ruled Invalid - The New York Times](#)

Evernote is in Trouble

Lots of people tell me that they use Evernote for organising information. I did use for it for a while in 2008/2009 but found that it wasn't really useful compared to other tools. Around December 2014, Ethan forced me to have another attempt at using it to share documents, writing projects and business

information. It was exactly the same crappy interface, awful data handling and low quality user experience I remember.

Sometime in March, 2015 we abandoned it completely.

This article talks about the stagnation that has happened at Evernote and the possibility that it might not survive after a a massive amount of internal trouble.

My advice ? Get off Evernote now and get a better workflow.

[Evernote is in deep trouble - Business Insider](#)

Threatbutt

You may laugh even though it isn't funny.

[LINK](#)

AWS in Plain English

[LINK](#)

Survey of the SSL Implementation of the Most Popular Web Sites

Trustworthy Internet Movement - SSL Pulse. A website that scans and updates information about SSL configuraiton on the Internet. Useful data for supporting your design decisions.

[LINK](#)

How Lets Encrypt Works

> The objective of Let's Encrypt and the ACME protocol is to make it possible to set up an HTTPS server and have it automatically obtain a browser-trusted certificate, without any human intervention. This is accomplished by running a certificate management agent on the web server.

To understand how the technology works, let's walk through the process of setting up https://example.com/ with a certificate management agent that supports Let's Encrypt.

LINK

Building a CDN in China - Cloudflare

This article talks about the challenges of setting up a data centre in China. The comments make interesting reading too about licenses necessary to host content. A reminder that global networks are hard.

How We Extended CloudFlare's Performance and Security Into Mainland China

Perl 6 Announced

There was a time when Perl was THE scripting language used by all network engineers to configure and monitor networks. Things happened - Cisco got their command line into a workable state for configuration, SNMP got good enough for monitoring, ITIL/ITSM meant that network engineers were no longer permitted to have access to the Windows servers (Linux did not comply with 'standards').

Having spent some time getting into Perl 4 in the 2000–2004 period, its good to see that Perl 6 has finally completed its decade-long journey.

But, do we care ? NetOps has been highly about embracing Python or, to a lesser extent, Go.

The Night Larry Wall Unveiled Perl 6 l 10 Zen Monkeys

Perl 6

Sponsor: How Talari SD-WAN Can Manage The Pain of the Branch

Branch office networking is a pain point. More and more people work away from the corporate network and they expect access to their increasingly demanding applications. IP telephony, collaboration and applications over the WAN are using mobile devices for applications and services in the public and private cloud and IT has limited control over that network experience.

Software Defined WAN (SD-WAN) is a cost-effective way to deliver branch office connectivity while simplifying the network.

Here 5 reasons to rethink your branch office strategy using a SD-WAN:

1. **Simplify the network with smart, workable policy-based routing.** The right SD-WAN uses network intelligence plus smart, policy-based routing to define business-relevant policies. Real-time, packet-level network intelligence paves the way for a superior experience.

2. **Use Internet connectivity with confidence**. A smart SD-WAN ensures reliable connectivity, regardless of the underlying WAN technology. Use affordable broadband Internet, metro Ethernet or 4G wireless, without worrying about network outages, network type or provider quality impacting user productivity.

3. Get more out of the bandwidth you're already buying. Backup WAN links are only used when the primary link fails. With the right SD-WAN, you can use all of that bandwidth, all of the time.

4. Deliver a better experience for cloud services. With Talari SD-WAN, you can extend the reach of your corporate WAN into "the cloud" so you can control, manage, and gain visibility into the connection between your data center and your private, hybrid and public cloud instances. Each and every packet always uses the fastest way to its destination. And that maximizes quality, even for cloud apps.

5. Unlock the business value in your network. Your network can be a treasure trove of information about how to improve the performance and availability of your links and most important applications. A Talari solution can unlock that data and give you visibility into the WAN for diagnostics, long-range planning or

Talari is the SD-WAN innovator and market leader with thousands of customer sites running on our THINKING SD-WAN solution already and getting reduced cost, improved reliability and resiliency for superior application performance. Watch the "Defining Software Defined**" chalk talk video with Talari Co-Founder and CTO, John Dickey or learn more at** www.talari.com**.**

Human: Common Language in Multi-Lingual Companies

Working in big companies means that you can meet and handle big challenges. Working in multi-lingual companies with hundreds of colleagues in different companies requires attention to detail. One way to improve communication is to define common terms and use consistent words and terminology.

Language Barriers

Working with pan-European colleagues inevitably means conference calls where native languages can span a wide range such as Russian, Polish, Bulgarian, French, German.

Speak Simply: If your only language is English (sadly, that is me) then you may never have taken the time to think about the words you use, your speech patterns and grammar, speed of deliver and similar issues.

You can improve communication by speaking plainly and simply.

Speak Normally: I find it is instinctive to speak English slowly when a non-native speaker has slower rate and halting speech patterns. One day I realised that most people who have English as a second (third or fourth) language can "hear" it just fine. They have a lot of practice watching TV or through reading for example.

Speaking English is much harder then listening. English as a second language is easy to comprehend but hard to speak.

Some Ideas

Use instant messaging or collaboration tools - in my experience, co-workers often have very good written english skills and can easily be communicate in collaboration tools.

Common Language: In big companies, big teams or silos can develop their own 'lingo'. In IT Infrastructure, storage networking uses widely variate terms compared to normal networking. I found that building a document that contained lists of terms and an "agreed" definition helped with on-boarding new people.

The language itself matters a bit but what gets the job done is using the same words for the same things.

Ask and Be Humble

Something I learned over time was to be humble. I wish I had learned it earlier. Respect that the other person is speaking in your language and that this skill is critical to the task and project. Take time to admire and appreciate the effort invested in developing this skill. Now it is your turn to put effort into understanding them.

Be humble by asking the co-workers if you are speaking too fast, using difficult words or incomprehensible english. (e.g don't use the word incomprehensible). Be humble and take it on yourself to be better at communicating.

Recent Articles

The last five articles published on EtherealMind and Packet Pushers blogs

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

PacketPushers.net - The Last Five

Network Break 182: BGP Hijacked For Cryptocurrency Heist; Juniper, Big Switch Unveil New Products - Link
Show 387: AWS Networking – A View From The Inside - Link
PQ 147: Connecting Security And GDPR Compliance (Sponsored) - Link
Datanauts 131: Masters And Mentorship - Link

Network Break 181: Russia Accused Of Infrastructure Attacks; US Targets ZTE - [Link](#)

Fun Stuff: Passwords Are Funny ?

Passwords are funny ?

Saying Thankyou ?

Got an email asking if there was a way to say thanks for the content. Packet Pushers is a business supported by advertisers and simply by subscribing, listening and reading we are able to earn enough money to survive. Its a nervous life running your own business but its working for us.

If you would still like to offer even more then I have an [Amazon Wish List](). I like reading science and fantasy books in the spare time that I have and my wish list is my multi-year collection of suggestions and referalls that I will buy and read ..... one day.

The End Bit

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