

IN THIS WEEK'S ISSUE: Cisco's Big Week, Starting Your Own Business, and The Secret To Successful Teams. 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 26

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The "Hyperconverged for your convenience" issue.

Thought For The Week:

What are the two happiest words in business? 'Meeting cancelled.'

1. Cisco's Big Week At The Partner Conference

by Greg Ferro

Cisco got out its toy box this week for its Partner Conference in the US. We got to see a lot of announcements, and I'll try to cover them here.

Resellers Are Special

Cisco likes its resellers. They are a low cost business model to reach customers where Cisco doesn't have to handle the sales, order fulfillment, and debt collection. Resellers like Cisco products because customers buy those products and resellers can make a profit.

Cisco gives resellers access to more information than customers. This gives them an edge in the selling process so that customers see value in resellers. The theory is that for customers, the reseller is a trusted partner of more than just Cisco products.

Cisco has announced a new digital marketing platform for resellers using the title "Powerful Partnerships" and pledging a focus on reseller profitability, an issue that has been a problem for some time. Cisco's pricing to resellers is more or less fixed and, with so many operations selling the same products to the same customers, the resellers squeeze their margins to unsustainable levels.



I remain unconvinced that resellers have a long-term future because there are too many middle-men (& their profit margins) in the chain between Cisco and the customer.

In theory, this leaves Cisco vulnerable to disruption--and the Internet should be disrupting this ecosystem. Yet Cisco seems unable to make a transition in the sales chain. So it's resellers for the foreseeable future.

Cisco Hyperconverged Infrastructure (HCI)

A "power-partnership" with Springpath and the UCS server business unit has created a Cisco HCI solution called HyperFlex. You probably haven't heard of Springpath because no one has. They disappeared in Nov. 2015 and were assumed dead until the announcement this week.

HyperFlex is an appliance-based virtualization platform. Instead of buying servers, storage, networking, VMware ESX/vCenter and then spending months making it work, HCI offers a way to buy a bundle of products, guaranteed to integrate and be

supported. (Apparently, our standardized x86 servers, SSDs and Ethernet network are not reliable enough to work together without magic vendor blessings).

I read a bunch of reviews about Cisco/Springpath HCI. Here are some links. They do a better job of telling you about HyperFlex:

[Cisco And Springpath Take On Hyperconvergence Incumbents](#) - Next Platform

[Cisco HyperFlexes its muscles.](#) - UCS Guru

[Citrix Adds Cisco HyperFlex HCI as Secure App and Data Delivery Infrastructure Option](#) - Citrix

I find several things about this partnership a little strange - I would have expected Cisco to buy Springpath instead of partner. And will Springpath work? The last time Cisco did storage (the core of the HyperFlex product) with Invicta it failed badly. I wrote more about that on [my EtherealMind blog](#).

On the whole, this is great move for the Cisco UCS business unit. It can sell products without having to work alongside the ACI team, which causes problems in the sales cycle (yes, many people have told me this).

Also, compare Simplivity ([more than 1,000 UCS deployments](#)) or Nutanix for pricing and features. Those are comparable HCI platforms that have been much more successful to date. I have no doubt that Springpath is going to get great sales with the Cisco sales machine behind it, but to my mind the product isn't yet proven.

Cisco Multi-Cloud Architecture

Cisco has been ignoring public cloud, more or less. Aside from some grudging virtual router and firewall products, Cisco can't make money from the public cloud. BUT you could promote a multi-cloud product strategy that keeps you relevant and in the mind of the customer.



The picture above shows the elements of the "Multi-Cloud Architecture." There isn't much new here: ACI for the on-prem DC network, software orchestration for the on-prem hosts and virtual devices using existing tools from Prime/APIC-EM/ESA etc.

The "new" part is likely to be the [acquisition of CliQr](#), which was announced this week. CliQr is a public & private cloud orchestration platform for VMs. A GUI lets you deploy VMs in any type of cloud, public or private, and it will be integrated into the Insieme/ACI product to extend the reach of ACI into the public cloud.

I'm not sure where this leaves Cisco InterCloud, since that isn't mentioned, but that could be on the road map.

I believe that the full vision of ACI is to start with the network and then move into ownership of everything in the data center, regardless of where your DC is located. I hear that CliQr and ACI have been working together for some time so the integration is well under way.

This move means that Cisco doesn't have to develop the software internally and will abandon the projects that didn't make it in time. As a general rule, Cisco isn't good at building its own products, but it's much better at selling and sustaining them.

More Acquisitions

Cisco announced other acquisitions this week. First is Leaba Semiconductor.

Cisco remains the biggest designer and manufacturer of networking silicon. While it embraces merchant silicon from other vendors in many forms, it continues to invest in buying chip design companies. Cisco's [very short announcement](#) has significant implications. Leaba Semiconductor is a little-known chip design company in Israel. The background chatter is that Leaba has been:

1. Designing flexible pipeline ASICs for routing, or
2. Designing ASICs for direct optical networking
3. Insert your guess here

Cisco has made a steady stream of acquisitions over the past twelve months ,and I think there will be several more. The VC market for startups has changed; the VCs [want their money back](#) so it's the right time for Cisco to snap up the startups they want at a good price. Cisco is very canny about buying companies.



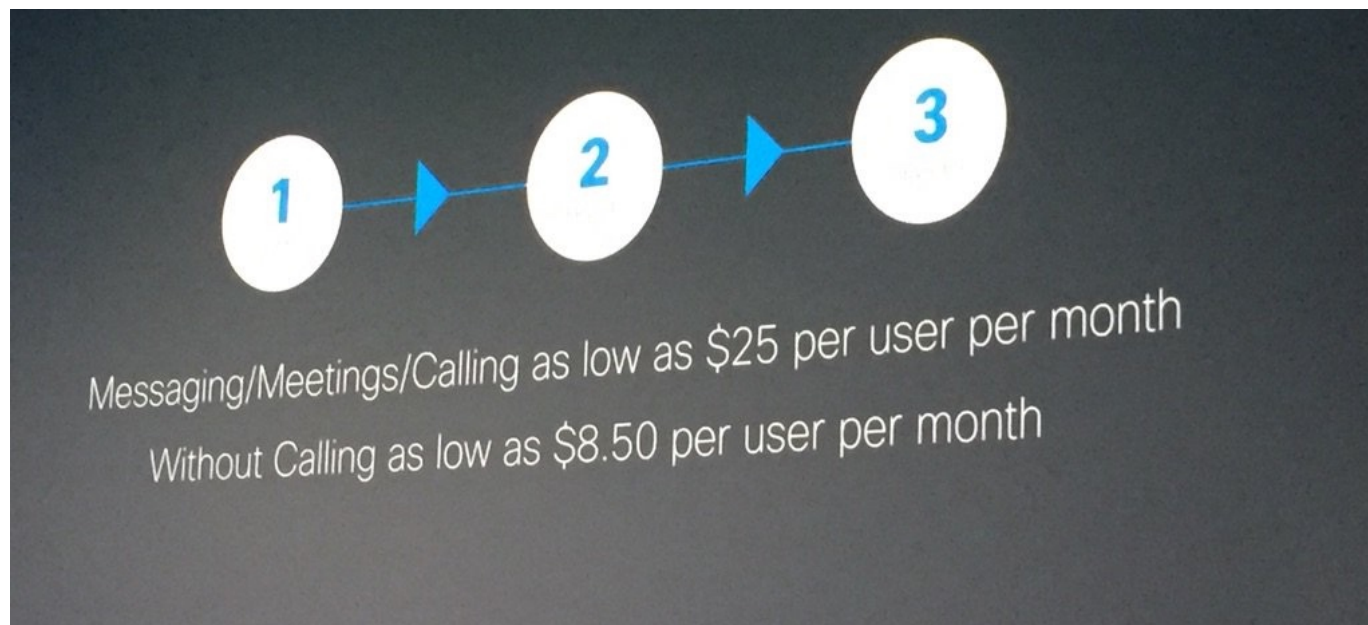
Project Spark

Collaboration is big business and Cisco has a [Slack](#) clone called Project Spark. I've

tried it and it was OK. The big feature is integration with Cisco Unified Communications products, so if you have them you will see more value.

Packet Pushers uses Slack to run the business at a cost of less than \$7 per person per month. It announced voice calls this week following the acquisition of [Screenhero in Jan 2015](#), with screen sharing/video conferencing to come soon.

When I saw this picture on Twitter, I winced:



I'm sure [Project Spark](#) will be more expensive than Slack because Cisco has an existing customer base, sales people, and resellers to get customers signed up. But an oversized price differential like this on a product that lacks the integration features of Slack seems imperfect.

My view is that Slack is a better tool and doesn't require users to change behavior. That's a feature, not a bug. Good luck with whichever you choose.

NOTE: Slack is free to start. You should be using it. Really.



2. So You Want To Start Your Own Business

by Ethan Banks

In *Human Infrastructure 25*, I wrote about [the challenges of working for yourself](#). Let's take this a step further. What if your goal is not merely self-employment, but starting a business?

Starting a business is all the rage these days, as pundits proclaim the importance of "pursuing your passion" and similar poppycock. Note that the folks recommending we all get out there and do our thing are already ridiculously successful.

In that context, listen, for example, to Tim Ferriss's podcast and those he interviews, but keep a healthy grip on reality before you take the plunge. The reality of running a business is far from the dreams scribbled on napkins in Silicon Valley bars.

Let's consider a few of those realities.

1. You have all the same problems of self-employment, but more.

Running a business that employs or contracts other people implies that you've got more work than you alone can handle. Administration, job tracking, and accounting requirements scale linearly with the number of projects your business takes on. Who will do that work? Hint: not you, my technical friend. You're not good at it, and it's not billable time.

2. You have to coordinate more than just you.

When self-employed, you have one person to worry about -- yourself. And, as a grown adult, you likely have a reasonable command of your calendar, workload, project timing, and so on.

As a business owner, you not only have to coordinate your own activities, you have to be sure that the folks you've added to the team are ready to go as well. Even if you hire competent self-starters, you will have to constantly weigh whether the work everyone is doing is the right sort of work.

Being busy is easy. Being busy about the right things is hard, and as the business owner, it's up to you to steer the ship for everyone.

3. Contractors require annual 1099s.

In the US, you must submit a 1099 form for anyone you've paid more than some small cutoff value (I believe \$600 in a tax year). That goes to the government, and it goes to the contractor. This isn't hard to deal with, but it's one more thing you are obligated to track.

4. If you have full-time employees, you will need help with legal requirements.

Consider payroll administration, including related taxes, as well as benefits administration. If you think you can do this yourself while also contributing to the bottom line of your business, forget about it. You can't.

Remember that companies of size have entire accounting and human resources departments. Even if you just have one or two employees, you'll have to outsource these functions to providers.

5. You will need a lawyer and a tax accountant.

Why will you need the services of these professionals? Because operating a business with owners, employees, an operating agreement, etc., is a twisty road through a live minefield. If you miss an unexpected turn and go off the road, a mine blows up.

Lawyers help you understand the ramifications of your business' organizational decisions, and will be necessary when considering serious changes or contractual agreements. Tax accountants help you compute your tax obligations and file as a business owner.

If you operate in multiple US states or have employees in multiple states, taxation becomes impossible to understand for the amateur, as you will likely have federal, multi-state, and local obligations -- at least filing obligations, if not financial ones.

6. Cash flow is lumpy, but payroll isn't.

As a self-employed person, you learn to deal with the cash being flush one month, but light the next. Companies pay when they pay, typically from 30 to 90 days, and you just roll with it. As a business owner with a payroll, this lumpy cash flow places

pressure on you. Payroll is a recurring expense that doesn't care if Super Big Company with no respect for your net 30 terms hasn't paid its enormous bill yet.

Doing business in America is more difficult than being self-employed in America, which is hard enough. Over the years, many of my friends have taken the plunge, often with dreams of building the IT consulting organization they always dreamed of, or bringing some new product to market. Some of them have made a go of it. Most have not.

If you're nurturing a business dream, good for you. I mean that sincerely, because I relate to exactly where you're coming from. But before you, too, take the plunge, know what you're getting into. Find good counsel, do your homework, and make every decision with as much knowledge of what you're taking on as possible.

Sponsor: Talari

Three Ways Your WAN Will Change for the Better in 2016

After years of status quo, the WAN technology market is bubbling with innovation. It's just in the nick of time, too. No one really loves their WAN. Costs continue to rise, and users consume all the bandwidth you can afford to buy—and then still complain that the network is slow or their apps simply don't work right.

It doesn't have to be this way. Talari predicts three ways your WAN will change for the better in 2016:

1) You will have a more flexible, reliable and self-healing WAN. The industry analyst predictions vary, but no matter how you slice it, they all seem to agree that SD-WAN is the next big networking evolution. Organizations will migrate to SD-WAN to radically improve the user experience and gain new levels of flexibility when connecting branch office locations, data centers, and cloud services.

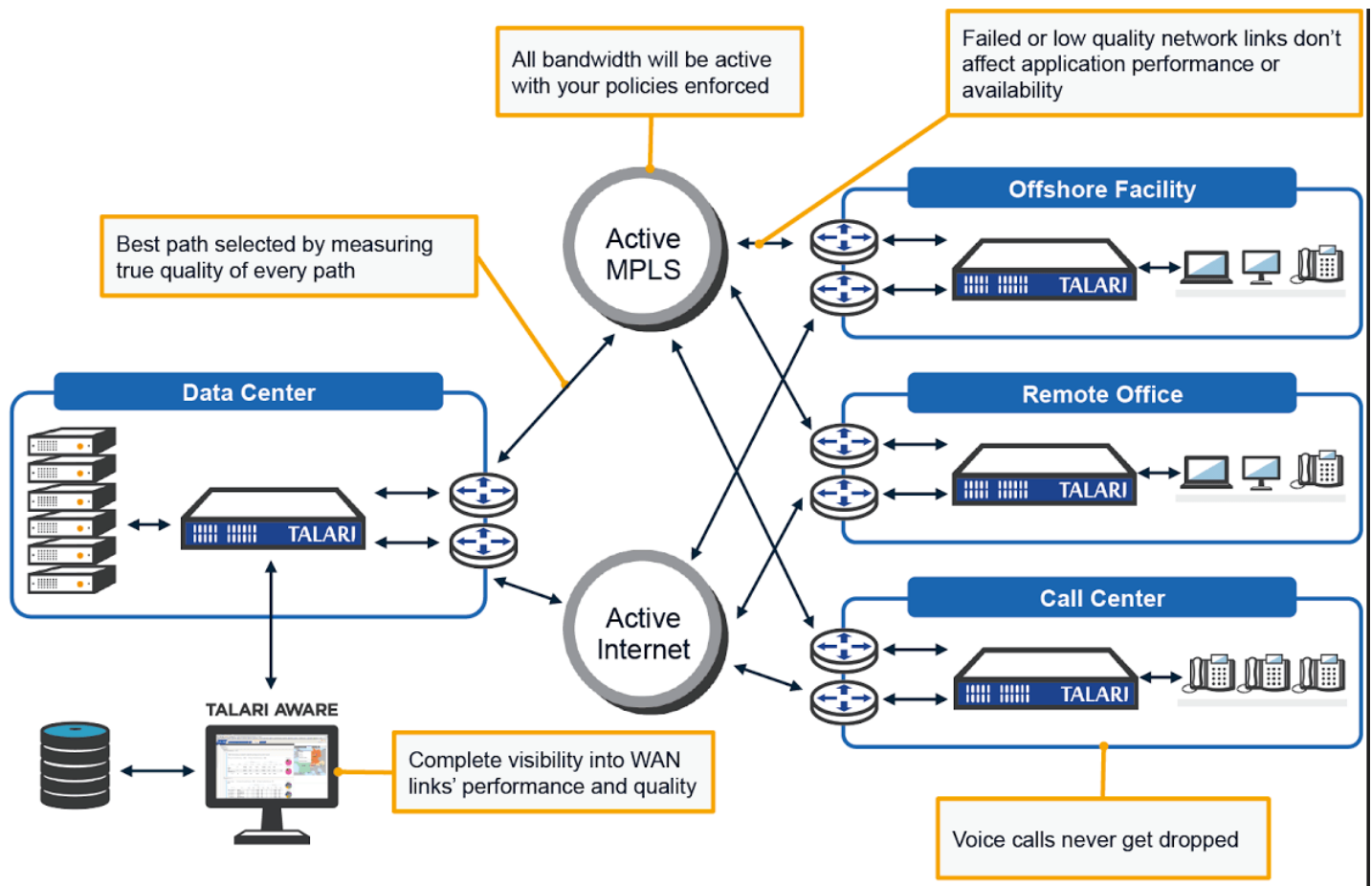
With an SD-WAN, you can choose any WAN transport that works for your business. That means you can keep your trusty MPLS circuits if you like, but as bandwidth needs grow, augment that connectivity with more affordable choices. It can be broadband Internet, metro Ethernet, 4G/LTE or any other choice—and because the WAN is virtualized, traffic will simply flow over the fastest available links.

Unlike traditional WANs, an SD-WAN can make packet forwarding decisions based on the quality of the links and the application requirements. By measuring latency, packet loss and jitter on each and every path, an SD-WAN can proactively redirect traffic in milliseconds so network outages and congestion don't give business-critical applications any pause.

2) The rise of big-data style network analytics will give you end-to-end visibility across the WAN, putting you in the driver's seat. With network analytics, detailed network performance metrics can be collected, correlated and analyzed across the WAN. That gives IT greater visibility into network quality and how applications and workloads behave across the enterprise. That visibility is welcome, whether you are diagnosing a problem, planning ahead for the rollout of a new application or service, or making sure you are getting your money's worth from your carriers' service level agreements.

3) You'll spend less time worrying about the WAN, so you can focus more on strategic projects to drive the business forward. Early adopters of SD-WAN have seen from 40 percent to 90 percent lower costs. They spend less time troubleshooting problems and babysitting the WAN, which frees up more time for strategic projects.

2016 is a great time to revisit your WAN strategy. No rip and replace required with a Talari SD-WAN. To learn more, download this [whitepaper](#) or listen to this Packet Pushers [podcast](#) that includes 4 enterprise IT executives discussing their real-world experiences with SD-WAN. If you are ready to discuss the specifics of an SD-WAN for your enterprise, request a demo [here](#).



3. Google's Secret To Successful Teams? Taking Turns & Empathy

by Drew Conry-Murray

Teamwork and collaboration are a fixture of modern work. This is particularly true in IT, where employees work together within and across technology silos, as well as with other parts of the organization, be it finance, marketing, or end users.

Some teams are effective; they accomplish goals and deliver results. Other teams are a hot mess—dysfunctional, unpleasant to be a part of, unable to achieve goals.

A [recent article in the New York Times Magazine](#) details an intensive, years-long project by Google to understand why some teams in the company succeed and others fail. Google recruited researchers, including sociologists, statisticians, and engineers, to delve into the problem.

The researchers gathered piles of both qualitative and quantitative data, interviewed managers and employees, and reviewed troves of academic studies on management and human interaction.

The project struggled to crack the code of ideal teams. As they accumulated data, they found there was no optimal configuration based on personality types, or subject matter expertise, or gender balance, or even whether team members socialized or didn't socialize outside work.

But as the project continued, the researchers began to tease out two qualities of successful groups.

First, according to the article, "...members spoke in roughly the same proportion." In other words, each team member had approximately the same opportunity to voice opinions and ideas.

The second marker of successful teams was "social sensitivity." That is, team members were able to take the emotional temperature of other team members through cues such as facial expressions and tone of voice—and then respond appropriately.

Together, these two traits create a climate in which team members feel like they can take risks—offer ideas, express opinions, put themselves forward, even share

personal feelings—without fear of embarrassment or recrimination.

In other words, good teams account for one another's humanity.

This isn't to say all teams need to be driven by group hugs and simpering, infantilizing niceness. Good teams can be buttoned-up and all-business.

But good teams also have to acknowledge that they are dealing with people, not widgets. Sometimes we're going to say smart things. Sometimes we're going to say dumb things. Sometimes we have bad days.

If you work on a team where you know you can voice ideas, and where you know your personal foibles will be tolerated—and you tolerate others' in return—that's a much more conducive environment to get things done.

Captain Obvious

It seems a little foolish that it would take a long-term research project to unearth a fairly obvious conclusion: that we're people, and not individual units of productivity.

But IT is driven by data and metrics, and IT practitioners exist in a realm that prizes logic, functionality, and efficiency. So it's tempting to think that people can be optimally configured, like machines, by finding ways to eliminate the emotional and irrational aspects of human nature—all the squishy bits that can make working with other people so frustrating.

In fact, it's kind of a relief that a highly rational, data-driven organization like Google discovered that acknowledging and accepting our humanity, rather than trying to program around it, is actually more effective.

I expect it's a lesson that most organizations, and teams within those organizations, have to learn over and over. And I'd be interested to hear from readers if their own experiences underscore or contradict Google's conclusions.



If this is how your team gets along, you may want to read the whole [New York Times article](#).

Sponsor: Riverbed

Ensuring Security Through Network & Application Visibility

Everyone knows that security can be a challenge in today's complex IT environments. According to [recent survey results](#), 60% of cybersecurity professionals think getting security visibility is more difficult in a cloud-based environment as compared to a physical network. The same survey also showed 50% agree that it's difficult to audit network security when working with cloud computing infrastructure.

At Riverbed, we hear these same concerns from customers—that is, until they see what Riverbed can do to augment their security capabilities with end-to-end visibility.

It's true that a cloud-based environment can complicate security precautions, but only if an enterprise fails to use a robust system for unified visibility. Traditional approaches to gathering security data try to combine reports generated by vulnerability and patch management systems with data gathered by interviewing applications teams. This approach falls short because asset inventories are almost never complete and, at best, are only as current as the last scan.

With Riverbed, an enterprise can develop and maintain an ongoing, real-time, accurate view of the network including a complete inventory of network assets, a map of network dependencies and actual usage—thereby eliminating much of the confusion cloud-based and hybrid network security has become known for.

Then there's the question of auditing. How can an enterprise make sure everything is auditable in a cloud-based environment?

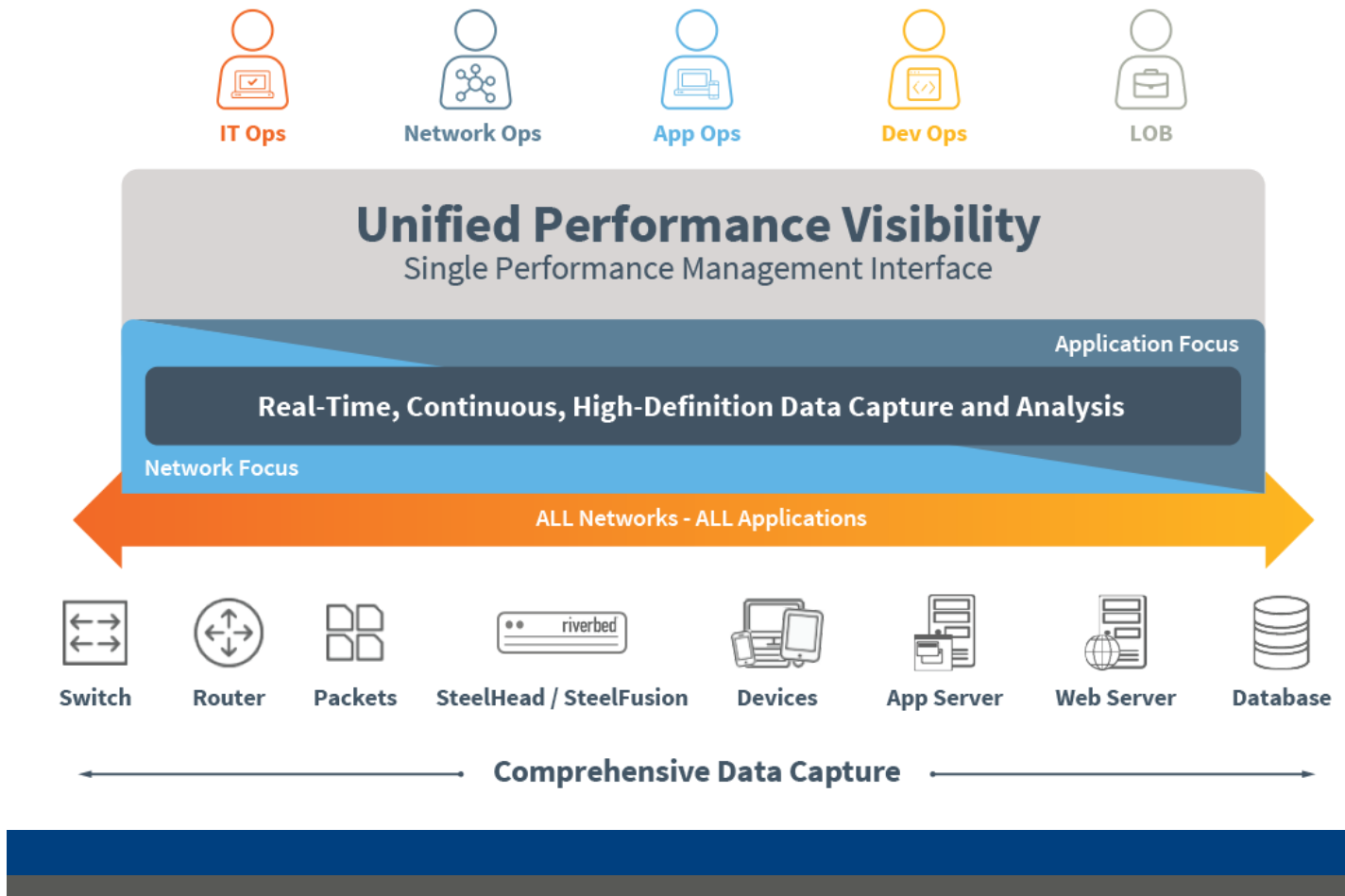
[Riverbed enables organizations](#) to drive workflows into daily operation that can:

- Automatically map their networks
- Manage change, track compliance to PCI, NIST or other policies
- Plan for End of Support/Life for infrastructure
- Conduct robust survivability analysis
- Conduct threat modeling for common attacks such as DDoS, DNS amplification, HTTP amplification, and more

With Riverbed's Application Performance Platform, management and operators can pull reports on situational awareness across the enterprise. This robust capability enables collaboration and teamwork for operators and auditors. Documentation for auditing is especially important to companies that require industry or regulatory compliance such as PCI, NIST, FIPS 200, SB-1386, GLBA, and HIPAA.

All this comes as a revelation to many of our customers, and that's before they get to hear the best part: with Riverbed, IT professionals can use the same instrumentation and data collection methods used for security visibility and leverage those methods for application performance management at no additional cost. Now that's good news.

Learn more about how to augment your organization's security capabilities with visibility tools at riverbed.com.



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.

Why "Being Professional" Is Actually Holding You Back

Pretending to be something you aren't is bad for your health and happiness. And ultimately destructive.

From **Medium:**

At work (and beyond), it's unhealthy for us to fake our personality.

[LINK](#)

Cisco And Springpath Take On Hyperconvergence Incumbents

This is the best post on the Cisco/Springpath HCI announcements.

From **Next Platform:**

"The idea with hyperconvergence is to replace expensive and unmalleable (from the point of view of customers at least) appliance-style storage arrays with more generic servers stuffed with disk and flash storage that can run distributed storage and distributed computing at the same time on the same iron."

[LINK](#)

Don't Hate the Phone Call, Hate the Phone

This article claims that the poor voice quality on a mobile phone is because physical smartphone design is wrong.

From **The Atlantic:**

"That's not just because our phones have also become fancy two-way pagers with keyboards, but also because they've become much crappier phones. It's no wonder that a bad version of telephony would be far less desirable than a good one. And the telephone used to be truly great, partly because of the situation of its use, and partly because of the nature of the apparatus we used to refer to as the "telephone"—

especially the handset."

I'm sure that physical design doesn't help, but overkill on voice compression is the biggest problem.

[LINK](#)

This Company Retains 95% of Its Employees — Here's Its Secret

This article touts the high retention rate of a company called Location Labs. Is that really a good thing? Many companies have low turnover of staff. This often results in a team of second-rate people who can't or won't move jobs. I call this passive retention.

What does active retention employment look like?

From **First Round Review**:

"When people join Location Labs, they stay. The company boasts a 95% employee retention rate, and has never laid off an employee."

[LINK](#)





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Priority Queue

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

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

The Network Break



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

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

Research Papers

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

The Digital Manufacturer - Resolving the Service Dilemma

Cisco is attempting to grow into manufacturing markets. This whitepaper, written by Cisco, discusses the need to measure everything in factories, buildings, and plants. It outlines that new revenue for services is possible if you enable sensors, monitors, and software and sell them as services to the customer.

Cisco calls this "digital transformation" and quotes lots of analysts and provides numbers. It's well worth reading if you keep your marketing goggles firmly in place.

From **the whitepaper:**

"As a result, more and more companies are being challenged to move from once-successful product-centric strategies to approaches that are more service-oriented. When successful, the results include significant, new revenue streams; increased customer engagement and delight (not just satisfaction); greater efficiency and cost savings; and value-added offerings. Companies that successfully leverage services are using them to drive disruptive new business models that, in effect, enable them to charge for business outcomes—for performance rather than physical assets."

[LINK](#) - (Direct Link to PDF download)

Product News

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

Fibre Channel Isn't Dead Yet. Apparently.

A flurry of largely unnoticed announcements about Fibre Channel went out this week. The basic push is that 32Gbps Fibre Channel has a dumb new marketing handle of "Generation 6" (or Gen6 if you try really hard to look cool). The idea is that if you run all- flash arrays (like the EMC DSSD for example) you need more bandwidth to move the data around.

This isn't true of course. "Storage performance" is a fairy tale that everyone wants to believe but doesn't actually exist.

[Avago - High Speed Networks and Gen 6 Fibre Channel Go Together](#)

[Brocade - The Matrix or Reality? The Network Matters for Storage Innovation](#)

This PDF from QLogic outlines the performance improvements of 32Gbps FC while

conveniently ignoring that 25G Ethernet is one quarter the price for the same throughput. And 50G is half the price for double the throughput:

[QLogic - The Performance and Efficiency of Gen 6 \(32Gb\) Fibre Channel](#)

Cisco Catalyst 6800 Gets Yet Another Supervisor Engine

The Catalyst 6000 switching platform has been around since the late 1990s and customers are still 'investing' in the platform. Cisco tells me the Cat6800 is a multi-billion dollar business and they have no intention of ending the product. Engineers who have the misfortune to run this platform will be weeping for careers and sanity. IT leadership will count pennies saved.

From **Cisco**:

"With the release of the next-generation KQ64024 Cisco Catalyst 6800 Series Supervisor Engine 6T, Cisco offers customers simple, scalable, smart and secure network services to build the next-generation network – today."

[LINK](#)

Cisco Nexus 9200 Switch - 25G/50G/100G Finally Arrives At Cisco

Cisco is the last vendor to offer a 25G/50G/100G switch based on Broadcom's Tomahawk chipset. Speeds & feed are the same as everyone else: 7.2 Tbps of bandwidth in a 1RU form factor, up to 36 40Gbps to 100Gbps ports, up to 144 10Gps to 25Gbps ports with a breakout cable.

[LINK](#)

Recent Articles

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

EtherealMind.com Latest

IFEED:[http://packetpushers.net/feed/\[\\$count=5\]](http://packetpushers.net/feed/[$count=5])

PacketPushers.net - The Last Five

IFEED:[http://etherealmind.com/feed/\[\\$count=5\]](http://etherealmind.com/feed/[$count=5])

Watch This!

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



Stephen Colbert spoke at the RSA Conference a few years ago, but his mixture of insight and humor is really top notch.



Wood, ball bearings, and a crank handle to make music? Yes, and it's delightful.



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Did We Miss Something?

Got an link or an article to share? Email it to humaninfrastructure@packetpushers.net

The End Bit

Sponsorship and Advertising - Send an email to 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.

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

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