

Human Infrastructure is a bi-weekly magazine-style newsletter from EtherealMind.com with News, Views and Opinions on being a human in IT Infrastructure. Hit the [signup page](#) to subscribe and join 5,013 subscribers.

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Pieces of Human Infrastructure

A Newsletter on a Life in Networking

Issue Number 4
03/23/2015

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Time is a great teacher, but unfortunately it kills all its pupils. ~ Hector Berlioz



Exordium
Subception
Augury

Travelling to Site

I was a part of a discussion this week on the pain of travelling to customers sites to perform work. This led me to reflect on how much of my life was wasted travelling to customer sites, how much time is wasted being at a

customer site and the fact that most work could have been done using the Internet.

Travel Time is Work Time

Catching planes, trains and driving cars to get to a customer site takes a LOT of time. In my past, it was common for me to take 12 hour flights to get to a destination. Factor in 2 hours to and 2 hours from the airport plus 2 hours ahead of the flight the entire trip needed 18 hours.

Did I get paid for those 18 hours ? No. Even worse, managers at told me that travel was a privilege and foolishly, I believed it.

100% Availability

When I turn up at a customer site, I need your 100% attention. If you walk off to attend some other task, my personal time will have been wasted. If your reseller or vendor engineer is sitting around drinking coffee at \$3000 per day while you attend a staff meeting, then someone who is paying the bill will be disappointed.

It would be better if I could spend just half-a-day at your site but travel makes that impractical.

Replacing travel time with Internet

Late last year I started working with my clients to reduce site visits with remote working. Instead of spending money on car mileage & fuel, travel food, and wearing out my "office pants" I have been spending money on Internet tools that make remote working **workable**. So far, GoToMeeting, Skype and Slack subscriptions have been good investments. I have some other tools that I am not happy with but haven't found solid alternates.

You know what ? Its working. Its not easy to change the habits of a lifetime but regular sessions of one to 2 hours to work on big problems is working better than "3 day workshop". Less damage to customer day-to-day.

One thing - its still valuable to meet in person. You can't always replace the interaction, just do this much less.

Note on Collaboration Tools

Enterprise collaboration tools are not suitable for work delivery. They don't have the flexibility or data richness that you need to replace personal interaction. Look to low-cost cloud services that are modern and have features for data richness.



Things On My Mind



"Breakfast Stout" for afternoon tea. Such a REBEL

Things on My Mind

On Sunday, when a pale sun was doing its best to shine some light I headed to my local pub and found this splendid breakfast stout. I took out my notebook and thought back on the week.

Path Computation Element (PCE) - This technology continues to intrigue me. The IETF has expended large amounts of effort to publish standards. Many high profile BGP/MPLS vendor employees have been publishing presentations about the wonders of it. This wiki entry explains why you might actually use it:

IETF RFC 7491 (Informational) **A PCE-Based Architecture for Application-Based Network Operations**

HTTP2 continues to gather momentum with NGINX announcing plans to support it soon. Discussions with a academic institution last week suggest that the impact to their systems could be truly disruptive tho their plans.

The OpenCompute project had a big meetup last week and saw several major announcements of new software contributions that shows we will have new choices for network hardware in the years ahead.

I believe that Whitebox is still early but just like Linux in 2000, its something that will build over time to take a significant position in the market.

Hadoop clusters in the Enterprise - The "crazy startup" phase of Hadoop may have passed like teenaged puppy love but Enterprises are still in the early phases of deployment. Interesting discussions about low latency, high bandwidth network designs for high performance Hadoop infrastructure.

As an application, Hadoop performance relies on a high performance network with zero jitter. Bandwidth and latency are not critical concerns for most enterprise applications. Think about how this would change your network design.

Pod/Core Network Architecture - an Hadoop network is a single purpose design and very different from the multi-purpose, bad-at-everything-good-enough-for-most-things designs of today. I'm reminded that I need to write about Pod/Core network architecture sometime.

The best part of the pod/core architecture is that equipment can be replaced

at three to five years cycles instead of the current 8 to 10 years. Networking needs to move faster to keep up with servers, virtualization and applications.



Vendor News

Vendors have a lot to say but not much worth listening to.
Picking signal from the noise.

Vendor News

Selection on news from vendors that might be worth looking at. Looking for unusual, exciting, weird or amazing without the ho-hum.

Blue Coat to be Acquired by Bain Capital

Blue Coat Systems, Inc., a market leader in enterprise security solutions to protect enterprises against even the most advanced threats, today announced that it has entered into a definitive agreement to be acquired by funds advised by Bain Capital, one of the world's foremost private investment firms. The company is being acquired from Thoma Bravo, LLC in an all-cash transaction valued at approximately \$2.4 billion.

[Read the Press Release](#)

Open Network Linux


Big Switch Networks, the company bringing hyperscale networking to data centers worldwide, today announced that the Open Compute Project (OCP) has formally accepted Big Switch's contribution of Open Network Linux (ONL) as its reference Network Operating System (NOS). ONL is a Linux-based open source network operating system to bare-metal and branded white-box ("brite box") switches.

Open Compute Project (OCP) Formally Accepts Open Network Linux (ONL) | Big Switch Networks, Inc.

Broadcom Open Switch APIs Drive Innovation in Network Infrastructure

Broadcom Open Switch APIs Drive Innovation in Network Infrastructure | Broadcom

Broadcom doesn't want to sell switches to Cisco, it wants to sell switches to everyone Doesn't want to be stuck in a monopsony Cisco stills wants to make its own silicon and prevents Broadcom/Cavium/intel from expanding in this market.



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No sponsor this week.

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Internets of Interest

Internets of Interest

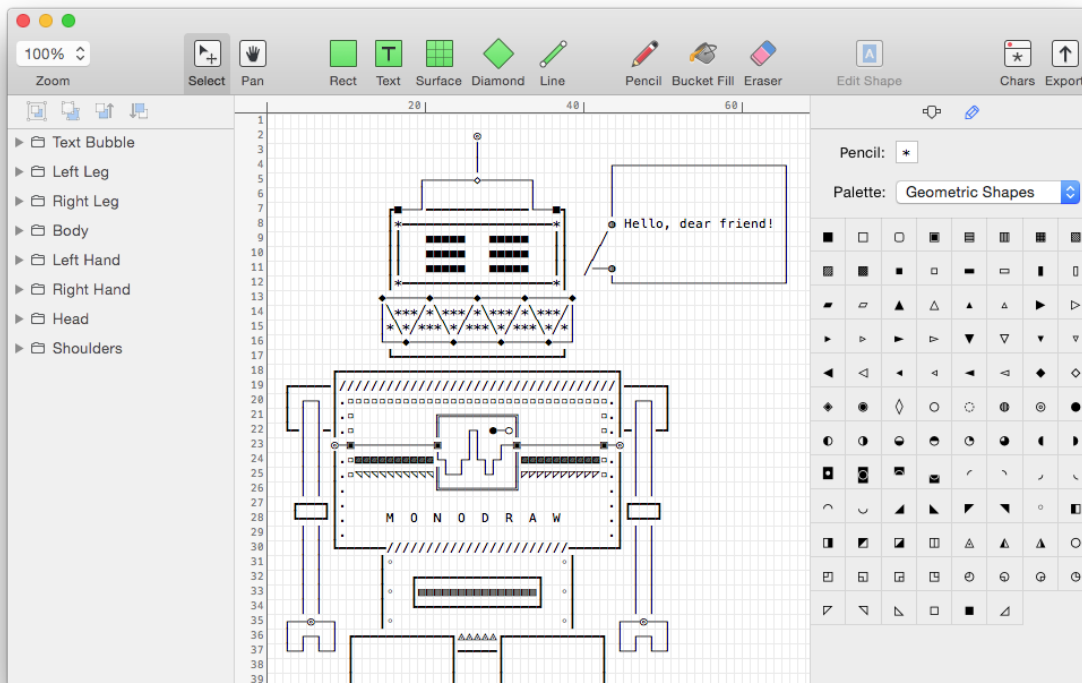
Collection of useful, relevant or just fun places on the Internet and a bit commentary about what I've

found interesting about them

ASCII Art Editor for Mac OS X

For those people that want to work in text exclusively there is a new tool for OS X that helps you make the best ASCII art ever. Introducing MonoDraw - <http://monodraw.helftone.com>. Currently in beta and in 40% discount if you buy now.

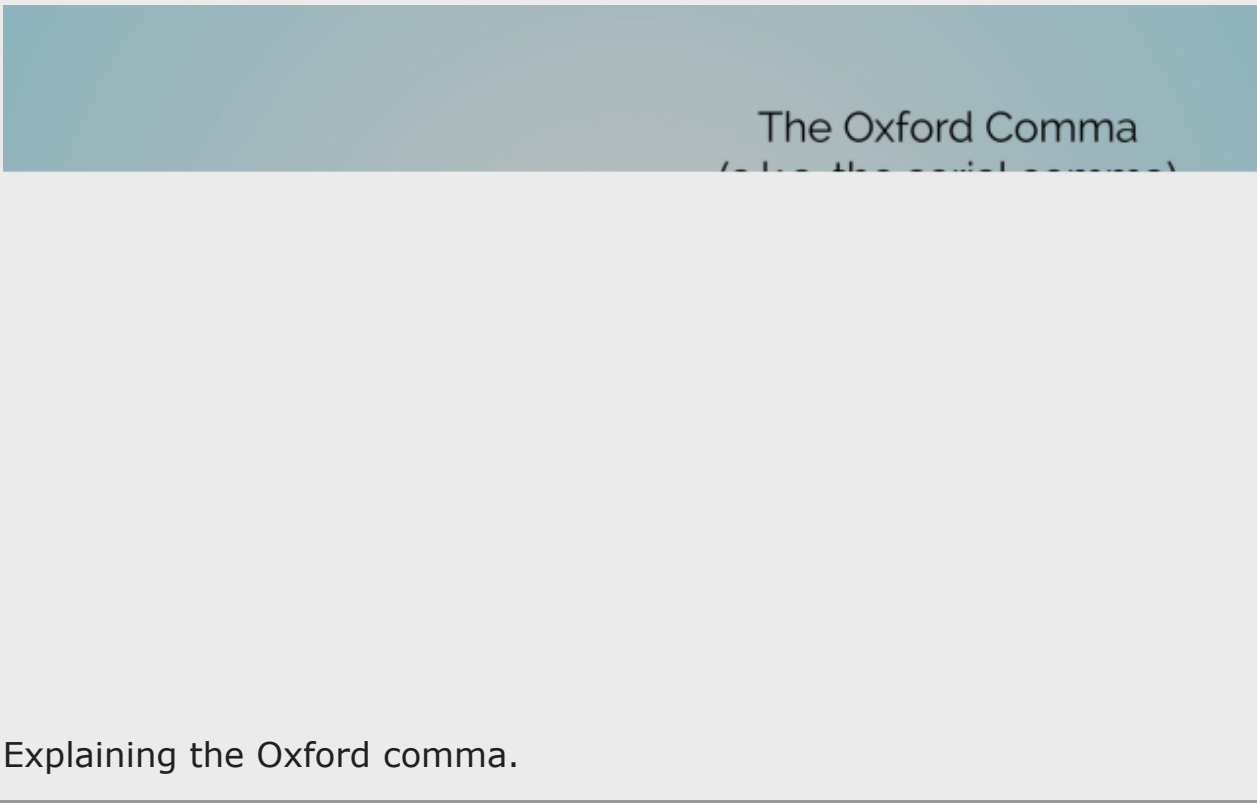
You can now build the ultimate MOTD banner for your network appliances !!!



Improving Linux networking performance

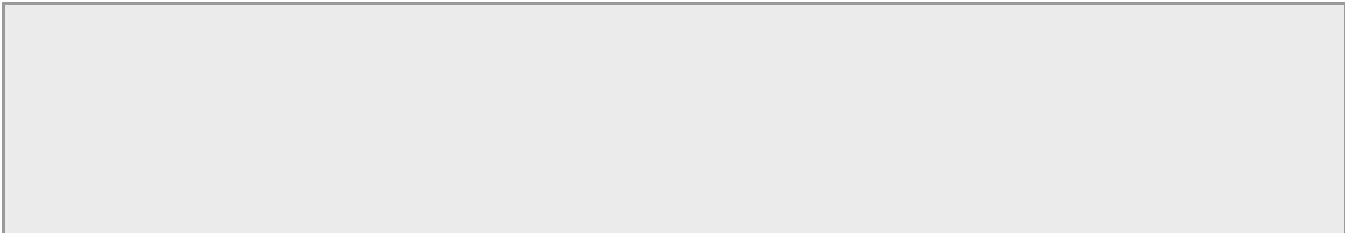
As network adapters get faster, the time between packets (i.e. the time the kernel has to process each packet) gets smaller. With current 10Gb adapters, there are 1,230ns between two 1538-byte packets. 40Gb networking cuts that time down significantly, to 307ns. Naturally, 100Gb exacerbates the problem, dropping the per-packet time to about 120ns; the interface, at this point, is processing 8.15 million packets per second. That does not leave a lot of time to figure out what to do with each packet.

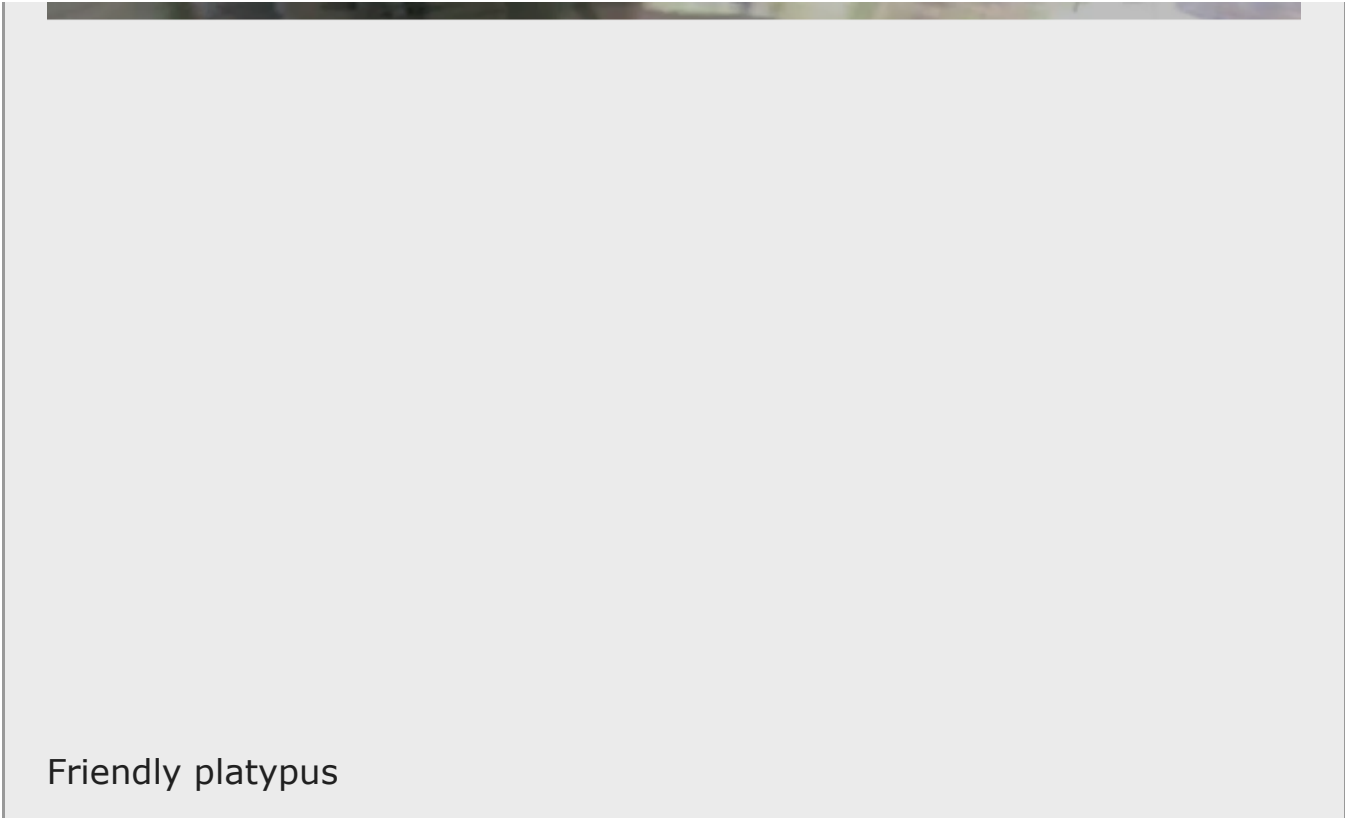
Improving Linux networking performance - LWN.net



The Oxford Comma
(aka the serial comma)

Explaining the Oxford comma.





Friendly platypus

I welcome your feedback, questions and corrections. Send an email to humaninfrastructure@packetpushers.net and I will write a response.

Sponsorship and Advertising - Send an email to humaninfrastructure@packetpushers.net for more information.

About Piece of A Human Infrastructure

A strongly curated newsletter produced by Greg Ferro that contain observations and thoughts on IT Infrastructure with a networking focus that he has seen, done, discussed, reviewed or just simply found on the Internet.

The format is structured but flexible (like any magazine) and will change over time as I settle into a routine of capturing ideas, topics that seem relevant and ultimately finding patterns that seem to be interesting to you. Your feedback will drives changes so don't hesitate to email with feedback or ask followup questions for the next edition.

About Greg Ferro

Greg is a co-host of the Packet Pushers Podcast a weekly podcast on Data Networking which has over 8000 subscribers. He blogs regularly at EtherealMind.com for the last eight years and is pretty well known these days. He also write as an analyst for Network Computing and Gigaom Research. He speaks at major events on Data Centre Design, SDN and life in technology. He moderates panels, advises customers and technology companies.

He works as a part-time network engineer in the UK on a freelance basis. Because real work configuring routers and switches remain not only a passion but important to keeping touch with the industry.

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