7 network technologies that will disrupt IT in 2015

Posted on December 4, 2014 by Mike Palladino & filed under All Posts, Industry Insights

2015 will be a pivotal year for the future of network technologies. Industry-wide shifts that previously seemed far away are just around the corner, and demand for higher bandwidth and improved network efficiency will require new approaches from IT networking professionals.

Below are seven predictions that service providers, hardware vendors and IT organizations need to consider in order to stay competitive in the coming year.

1. The 512k routing table problem will strike again

In 2015, many more organizations will experience network instability as millions of legacy routers hit their physical limits. This year, we saw several high-profile websites and networks knocked down due to widely deployed, older routers hitting their default 512k routing table limit. At approximately 500k routes today, and increasing by around 1k routes per week, the growth of the global Internet routing table, which refers to the Internet's total number of destination networks, shows no signs of slowing.

2. Slow IPv6 migration

What makes additional Internet congestion likely in 2015 is that companies don't want the headache of fully migrating to IPv6, so they are trying to squeeze as much IPv4 out of the

remaining allocations as possible, which is only adding to the inflation of the routing table. This, however, will be incredibly problematic for everyone because it balloons the routing table and brings hardware limitations to the forefront. Some organizations have been aware of these issues, but many companies will be caught off guard in 2015, and smaller enterprises in particular could learn some very painful lessons.

3. Businesses large and small will pay more attention to network speed

Internap's 2014 data indicates that networks only deliver data over the best path 15 percent of the time. Many large organizations in ad-tech, financial services and e-commerce industries already recognize this issue, and look for ways to improve network efficiency when a difference of milliseconds can impact their bottom lines.

In the coming year, we'll see even more companies outside of these large organizations look for ways to increase network efficiency. For instance, as more traditional "brick and mortar" businesses leverage the Web to sell their products and services, they will increasingly implement strategies and solutions that give their customers the best possible Web experience – from choosing appropriate geographic locations for their datacenters to using technology that optimizes data routes to ensure the fastest possible end-user delivery.

4. Service providers better be ready to handle everything from IoT…

Recently, I saw a refrigerator in Home Depot that had Facebook running on its touch screen. If posting a Facebook update from your fridge is not indicative that "the Internet of things" is almost here, then I have no idea what is. How long will it be before your fridge can place orders from your local grocery store account when you're running low on something?

As the Internet of Things continues to gain momentum, we'll start seeing increased network congestion which can significantly degrade the performance of these new connected devices. Increased network efficiency will be a key factor in supporting a high-quality user experience.

5. … to massive DDoS attacks

Not only have we seen a significant increase in the frequency of DDoS attacks, but we have also seen a monumental increase in their size. A typical DDoS attack used to be a spike of a few gigabits/second, and now it's typically HUNDREDS of gigabits/second.

That is a crushing, overwhelming amount of traffic to prepare for – the capital cost to build that amount of headroom into your network is something that only very large companies can afford. There are two main factors here: higher broadband speeds to end users, coupled with more devices connected to the Internet, which means more at-risk devices

that can be used in an attack.

6. How will service providers prepare? 10G will become the new 1G

Bandwidth-crushing trends in technology, from IoT to the growing size of DDoS attacks, are creating a situation where service providers are in a never-ending arms race to keep up with capacity that is growing faster than they can deploy hardware. These providers are trying to compensate by creating bigger pipes so they're not constantly behind the curve.

2015 will be the year that IT vendors will take a step up to networks that are 40/100G, and provide support for them. We're at the cusp of large-scale deployments, and 10G is not enough anymore. Price points will drop as demand for 40/100G increases.

7. Hardware vendors will get serious about SDN

Hardware vendors have been resistant to support Software Defined Networking (SDN), since it could potentially eat into their high margins and reduce their ability to lock in customers. If vendors do choose to support SDN, it will be in ways that are vendor proprietary.

The bottom line is that many of these big hardware vendors are not offering TRUE SDN support even though users are starting to see the power and potential of SDN. 2015 could be the year where traditional networking vendors have to start making a sea change culturally to accept something they have not yet embraced.

While these predictions may not be a surprise to most IT networking professionals, making such large-scale changes is never easy. "Someday" is almost here, and now is the time to make sure your IT organization is equipped to handle these inevitable new demands.

« Blog Home

Update Me!

Turn your Internet infrastructure into a competitive advantage.

Request a Quote

About Internap

Internap's high-performance Internet infrastructure blends virtual & bare-metal cloud, hosting and colocation services across a global network of data centers.

About Internap
Why Internap
Compliance
Events
Partners
Leadership
Press Releases
Careers
Internap in the News
Investor Relations
Awards

We're Here to Help

GET A QUOTE
LIVE CHAT
+1 877.843.7627
CONTACT

Follow Us

Recent Tweets

Internap

Internap