

Cloud, Ethernet's Role in the Cloud and Virtualization of Datacenters



The NetEvents 2011 APAC Press Summit closed successfully at the Indigo Pearl, Phuket, Thailand. The 2-day conference debated on current industry issues and trends plus round table press and analyst briefings attended by an audience of top execs from Arista Networks, Brocade, Extreme Networks, Fortinet, Blue Coat Systems, HP Networking, MEF, Niometrics, Sourcefire, UIH, IDC, Gartner, Analysys Mason, Market Clarity, Ovum, Forrester Research and others. The conference was also attended by Telecom Review.



Nir Zuk, Palo Alto Networks



Deb Dutta, Brocade; Shehzad Merchant, Extreme; Nan Chen, MEF; Passakorn Hongyok, UIH



Ian Keene, Gartner; Douglas Gourlay, Arista; John McHugh, Brocade; Shehzad Merchant, Extreme; Eric Papir, HP

Cyber Attacks

Giving the opening speech, Nir Zuk, CTO of one of this year's hottest Silicon Valley start-ups, Palo Alto Networks explained how hackers were becoming highly professional, financially motivated, and could penetrate the perimeter defenses of any corporation using simple social engineering.

Attacks are virtually on/off, so pass under the radar for weeks. "If it only happens once, security vendors will not find it," Zuk said. "And even then it can take a week or more to fix. Every

executable is a suspect, and there aren't enough security researchers in the world to fix all the vulnerabilities." Palo Alto's firewall technology looks at all documents and executables in a virtual machine and watches for malware-like behavior. "We do it in software in a datacenter and generate signatures for each piece of malware," Zuk said. "We can then block it within an hour."

Online identity is now the security front line, while credit card details - once the cybercrooks' gold standard - are now worth very little. The problem said IDC analyst Tim

Dillon is the sheer volumes of data flooding security vendors: "The environment today is trillions of things, billions of users, and millions of applications," he said.

Mike Haro of Palo Alto Networks said web application firewalls are not a total solution - you need to understand what the traffic is. Leon Ward of SourceFire argued that application traffic has changed so that its visibility and context are now the important issues. All the vendors present agreed that automated malware analysis was key - also that trust relationships were changing,

and an agile, adaptive approach was vital.

Governments and Clouds

From the outlaws of a criminal world, to the pillars of the establishment, Paul Sumner, senior manager at Analysys Mason, opened his research findings on e-Government and the cloud by looking at the drivers for change. He argued that governments are looking to the cloud to lower costs, improve services and gain greater insight into their citizens. Their challenges are to decide which services to migrate to the cloud, the

choice of deployment model, and the rate of migration - they must decide on data ownership, interoperability and infrastructure availability.

His examples of government cloud strategies included the US, Singapore, Japan, India and the UK, where the top challenges are security, legacy applications, cultural resistance in IT, and evolving standards, while the alleviations are quality SLAs, the prioritization of high value services, and sharing information on successful implementations. In terms of practical progress, we are at an early stage: "There's lots of strategy but it's a work in progress," he said. "Governments are approaching cloud as a way of making savings and they could make up to 20-25%." Asked if we could see a global e-government cloud, Sumner said this was unlikely.

New Carrier Ethernet Specifications

Speaking at the conference, MEF President Nan Chen outlined the proceedings

of the MEF's last quarterly meeting for 2011 and their particular relevance for APAC business. Key issues for the region include Carrier Ethernet Multiple Classes of Service (Multi-CoS), Ethernet mobile backhaul, and the rise of wholesale Ethernet services - and all three issues were addressed by new technical specifications progressed at the Quarterly meeting. He also announced strong support for the new MEF Carrier Ethernet Certified Professional (CECP) certification program, which is already boosting the skills availability in a highly competitive market.

Nan Chen explained how the letter ballot acceptance of the MEF's Phase 2 on Multi-CoS and Mobile Backhaul Implementation Agreements - extending MEF 23 and MEF 22 respectively - is especially an important issue for the region where, without a strong legacy network of fixed line connections, it is doubly attractive to leapfrog traditional leased line connections from cell sites to

core network and go for an all-Ethernet solution.

According to Nan Chen, the MEF Certification Program has been a key factor in accelerating this market acceptance because the programs ensure: "Equipment that service providers can rely on to build fully compliant high performance Carrier Ethernet services; secondly services that earn buyers' trust by conforming to MEF standards of quality and performance; and now also professionals with the proven knowledge and skills - providing a widely recognized benchmark for customer

credibility and career advancement." The first level - with two further levels under development - is already being awarded to individuals on the basis of an examination covering the fundamentals of Carrier Ethernet services.

Virtualization and Orchestration of the Datacenter

Virtualization holds the key to competing against the agile upstart companies snapping at his heels and vendors have a double challenge - to make a good business case and to knock out the competing solutions. John McHugh, VP



Eric Chan, Fortinet; Mike Haro, Palo Alto; Leon Ward, Sourcefire



Nir Zuk, Palo Alto Networks; Manek Dubash, Editorial Director, NetEvents



John McHugh, Brocade; Manek Dubash

& CMO, Brocade; Shehzad Merchant, VP of Technology, Extreme Networks; Erik Papir, Worldwide Director, HP; and Douglas Gourlay, VP Arista joined the panel to discuss virtualization and orchestration of the datacenter.

According to Merchant, the mantra of today is how to lower costs and, at the same time, keeping costs contained, increase reliability; because more and more applications are moving to the cloud, which means the cloud has to be reliable, very reliable.

"Along with that you have some key technology inflexion points coming together. In the datacenter traditionally you had different technologies. Today, everything is

converging to Ethernet. Storage is moving to Ethernet; in fact a large chunk of it has moved to Ethernet. High performance computing is also moving to Ethernet. And the LAN is just getting faster and better. So you've got these technology inflexion points and you have the business drivers all coming together, which is leading to a whole new set of nuggets of how you build, design and operate the network," added Merchant.

HP's data centre strategy for enterprises and for the cloud is something called converged infrastructure.

"So we'll spend a little bit more time talking about the network here in a moment, but certainly, as you look at moving your business ahead,

and it sounds like it's growing quite a bit, certainly things like compute and storage, management software, and even power and cooling are going to be critical aspects to growing your network efficiently. So certainly converged infrastructure is really the blueprint that will help you get to that new data centre architecture and enable the instant-on enterprise," said Papir.

"The datacenter networking space is not just about speeds and feeds. Clearly we've got the fastest biggest switch today in the market, but it's not just about speeds and feeds. It's the intelligence layer you put on top of that. And that's the area where we aim to differentiate. Clearly we have one operating system that goes across all our products

so that significantly reduces your operating costs, but also the intelligence to manage virtualization. To provide visibility into your virtual machine environment and to provide statistics, counters go a long way in reducing your long term operating costs as well. So it's not just about having cheap products, but it's the intelligence layer that you can put on top of those products to deal with your virtualized environment," concluded Merchant.

The big event also focused on two major cloud solution launches in the APAC region. HP presenting for the first time in Asia its FlexNetwork converged architecture, and Arista's releasing from "stealth mode" its closely guarded Extensible Operating System (EOS™) based platform.

Ethernet's Role in the Cloud

Ethernet's role in the Cloud was opened by Matt Walker, Principal Analyst, Ovum, joined by panelists Deb Dutta, VP Asia-Pacific, Brocade; Shehzad Merchant, VP of Technology, Extreme Networks; Nan Chen, President, MEF; and Passakorn Hongsyok, Director International Business from the Thai service provider UIH.

Walker forecast a \$233 billion cloud services market by 2016 and pointed out that, although cloud is not a core focus for telcos, they can still benefit from the connectivity gap, as the last mile is an issue. He summarized the benefits of Carrier Ethernet as flexibility, scalability, diversity and redundancy – describing it as a facilitator of the cloud: "Carrier Ethernet is probably one of the most important trends in the public network that we've seen over the last ten years, no doubt. Ethernet is now the de facto access standard."

"So there are a couple of other challenges as well,

non-obvious ones, when carriers get into the cloud services play. One of the biggest challenges, in my viewpoint, is the whole notion of dealing with identity management systems and policies and provisioning. When customers and enterprises outsource their applications to the cloud, within the enterprise there are strong tools available for identity management, things like Active Directory which leverage groups and users and roles. Based on that you can provide access control to your applications to your servers. When you move things to the cloud, how do you take that notion of identity of groups and roles into the cloud and how does a telco, from his own IMS systems, provide a single, cohesive view? I think that's going to be a pretty big challenge, whether for the tier one or even the tier two telcos getting into the Cloud services business, which is providing a seamless user experience, a seamless policy experience and

an identity management solution," commented Merchant.

Asked if there was scope for smaller telcos, Hongsyok said that Ethernet business was growing rapidly and that customers want rapid deployments. Merchant highlighted the challenge of dealing with IT management tools and policies: "How do you take things like group identities into the cloud?," Dutta talked about the importance of standards so that customers could develop an exit strategy from a cloud provider's facility: "You need a cloud ID that allows you to demarcate your domain in the cloud and migrate from one SP to another."

"Cloud is quite a complex market," concluded Walker.

Datacenter Network Fabrics

John McHugh Vice President and Chief Marketing Officer, Brocade said, "2011 was the year when the biggest issue of the 20th century came back to haunt us – individual freedom versus central control." Looking back over a year of challenging and insightful presentations from NetEvents summits across the globe during 2011, McHugh distilled the essence of what will become critical issues for CIOs in Asia over the next few years. "This year, business leaders worked in an environment full of challenges for the future. They will be thinking about risk," he said. He argued that IT was or should be transformational especially

given the growth of new end-user devices offering new ways of workforce provisioning.

On storage, he commented: "We are feasting on more information – it is important because the CIO needs to lead their strategy around information".

"CIOs cannot opt out" he added, as questions from the CFO and CIO will drive transformation while on-premise datacenters will be prime locations for years to come as datacenters virtualized. The network is utterly crucial to this process, although it is not yet robust enough. However: "the trend is inexorable - it will change economies and business models."

On datacenter network fabrics, McHugh predicted that in the next six months, over 50% of CIOs will be deploying a network fabric in their datacenter, and that it would be part of a converged infrastructure. On outsourcing and the cloud, McHugh described his early days as a production engineer at HP when the decision had to be made to outsource production to Singapore: "Ultimately, HP started looking at quitting a capital-intensive practice because someone at the top had the vision and understood that trends, directions and options needed that leadership. It's now ridiculous to think we wouldn't have moved forward. The cloud is the same. The biggest risk is that the competition does it first." ■