Anuta Networks aims to speed cloud deployments by simplifying network service

Analyst: Rachel Chalmers Eric Hanselman

5 Feb, 2013

Anuta Networks has pulled the wraps off what it calls network services virtualization technology. The idea is to deliver on-demand, anytime, anywhere network services for the cloud. The company's nCloudX platform works in much the same way as a compute or storage controller, but addressing networking rather than compute or storage resources. It plugs into standard cloud management frameworks (VMware vCD, Microsoft SCVMM, CloudStack or OpenStack) via a REST API. It addresses legacy and programmable network devices through an abstraction engine. It handles network service design, orchestration and management. Last but not least, nCloudX uses an OpenFlow connector to play nicely with Nicira, Big Switch Networks, Pica8 and the rest of the future of software-defined networking.

The 451 Take

We love the idea of a virtualization layer that addresses heterogeneous network resources the way server and storage virtualization abstract away the complexity of the compute and storage tiers. Of course, it's much easier said than done. Networks are typically multi-vendor, with many generations and iterations of devices. That said, Anuta's founders certainly have the background to tackle the problem in new and interesting ways.

Context

Anuta was founded in 2010. There are 61 employees at its offices in San Jose, Bangalore, India,

Tokyo and Dublin. Cofounders Chandu Guntakala, Srini Beereddy and Praveen Vengalam previously cofounded Jahi Networks, which was sold to Cisco Systems in 2004. The company is funded by its founders and remains tightly held.

Strategy

Network outages are the number one cause of cloud downtime, and they're not easy to address. Cloud networking infrastructure typically isn't automated, making it inflexible compared to server or storage infrastructure. Troubleshooting is complicated and requires deep networking expertise. All this makes it hard to provision networks to honor SLAs in a reasonable time or at a reasonable cost.

Anuta aims to simplify the design, deployment and management of cloud network services. To that end, it uses a model-driven architecture. This is designed to support both physical and virtual network devices from multiple vendors. With it, customers should be able to design services and place them in a catalog, orchestrate them and plan capacity, manage and assure services.

Technology

Anuta's nCloudX platform has three core components: the Service Design Engine, the Service Orchestration Engine and the Service Management Engine. The Service Design Engine includes a drag-and-drop tool to let operators assemble network services, customized by device and policy. For example, a Bronze service might link a virtual private cloud through MPLS and a compute firewall to a given port, while a Silver service might add load balancing and multiple ports.

The Service Orchestration Engine takes the design, adds it to a service catalog, allocates resources and then implements the service, taking into account the physical topology, device model and execution plan. Finally, the Service Management Engine maps devices to services and services to tenants, monitors device alarms and notifies affected tenants, and monitors tenant SLAs to ensure compliance.

The upshot is that customers should see better time to market, less operational complexity, fewer manual errors, better productivity, better resource utilization and tenant-level monitoring and alerts. Network service design and deployment should be a matter of minutes, not weeks. It's the promise we've seen fulfilled in server and storage virtualization, here applied to legacy, programmable and OpenFlow-enabled network devices.

Competition

There have been earlier efforts to virtualize network services. Probably the best known of these is LineSider Technologies, which was bought by Cisco Systems in 2010 and now forms the basis of the network giant's Intelligent Automation for Cloud (IAC). Juniper Networks offers comparable features in its JunosV App Engine. Anuta acknowledges that these are likely to be its biggest rivals for mindshare, but claims that both vendors' network service virtualization software will favor their own devices over those of their rivals. Anuta, by contrast, is committed to true vendor agnosticism.

Another player here is Cyan. While it's mainly focused on service providers and telcos, it is addressing the legacy interface issues that Anuta is looking to tackle. It has customers already and could step into the cloud space easily.

This space is under longer-term threat from full virtualization of network services. Riverbed already has virtual load balancing and WAN optimization integrated with VMware. Embrane hasn't been getting a lot of traction but has a service provider play.

SWOT Analysis

Strengths

A greenfield, platform-agnostic network service virtualization platform could let customers link together their legacy network devices with next-generation OpenFlow approaches.

Weaknesses

The company is wet behind the ears, and despite the expertise of its founders, faces an uphill battle.

Opportunities

As they evolve into service providers, IT organizations have taken to storage and server virtualization like ducks to water. The network is now widely regarded as the bottleneck for provisioning and deploying new services.

Threats

For all Anuta's bravado, Cisco and Juniper both support heterogeneous environments and will be hard to displace from their core customer bases.