The Question Shouldn’t Be Where are the Network Virtual Appliances but Where is the Architecture?

Lori MacVittie, 2010-04-02

We seem on the verge of repeating the mistakes associated with failed SOA implementations: ignoring the larger issue of architecture.

Everyone – from pundit to public – is asking the same question: "Where are the network virtual appliances?" But fewer people seem to be asking a question that needs to go hand-in-hand with that one: "Where are the architectural guidelines to support deployment of network virtual appliances?" SOA has been deemed by many to be a failure in part because it lacked true architectural guidance. Architects were simply unable – whether by lack of skills or training or lack of support from the rest of the organization – to design an architecture that took advantage of services and thus the result was often little more than "service sprawl." Services did not scale well, they were not so easy to integrate, and no one really had a good handle on what services were available, and where.

Lack of an architectural strategy to accompany a network virtual appliance will likely lead to the same end: network sprawl and a lack of scalability or worse – scalability that's costly in terms of expenses and resources.

Rich Miller, who'll be joining a panel of other industry notables at Cloud Connect to discuss Infrastructure 2.0 and what's necessary to successfully move forward with these "new" infrastructures, may have inadvertently pointed out the lack of architectural guidance related to virtual network appliances when he said:

> If a vendor is going to sell network virtual appliances, the nva's should be designed from the get-go to be scalable (both 'up' and 'out'), and designed with the notion that the 'appliance' is not just a physical appliance without the box. That is 'horseless carriage' product design, which casts new technologies in exactly the same roles as their precursors.

> What Allan doesn't say is that this may require the wider deployment of network infrastructure designed specifically for virtualized appliances and converged IO. It's not just whitebox, commodity x86 hardware running general purpose virtual machine environments for server virtualization.
>
> -- Rich Miller in *"Where ARE the Network Virtual Appliances?"*

Rich is focusing more on internal design in general, but any such "design" must also necessarily include how the VNA scales *in the target environment*. Scalability is at the heart of all definitions of cloud computing and without the ability to scale solutions – whether application, network, storage, or application network – any such implementation will almost certainly be deemed a failure.