Thought Leadership Spotlight: Kevin Riley, Sonus Networks

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"Dynamic networking and real-time policy can be intimidating at first pass. The IT community needs to get comfortable that this technology and new network model is as reliable as the older, static approach such that the upside benefits drive the desire for network transformation."

Nancy Leonard: I'm pleased to welcome Kevin Riley to this discussion. Kevin Riley is Sonus' Vice President, Engineering and Chief Technology Officer. Riley has served as the Sonus CTO since January 2014 and has more than 20 years of software development and engineering experience

To set the stage, Kevin, what do you see as the two or three most important challenges and/or disruptive technologies facing the IT community over the next three to five years?

Kevin Riley: The move towards hosting IT services outside the corporate domain creates a new set of opportunities and challenges in the areas of security and quality of service (QoS). Hosted Unified Communications (UC) and hybrid cloud architectures (both public and private) offer new network service delivery topologies that will further enable advanced IT service optimization. Inherent to these new topologies, however, is an environment of lessened control that must be addressed.

Additionally, the types of data delivered over corporate IT infrastructure is expanding geometrically and requires a new model for network management and scaling. As an example, UC is driving an order of magnitude increase in network consumption per user.

In the past, corporate employees would communicate via email and voice calls over the Public Switched Telephone Network (PSTN). Today, employees are using Voice over Internet Protocol (VoIP), video, conferencing and collaboration over IP network infrastructures. Network policy must be dynamic and highly granular to accommodate mission critical, bursty UC traffic to ensure these services are delivered with the highest quality.

Gone are the days of static traffic engineering and network design. It is prohibitively expensive to overdesign the network as a result of the aforementioned traffic level increases. Assets need to be managed in real-time to drive a high degree of monetization.

Nancy Leonard: In light of these issues, who are Sonus' customers and what problems does Sonus solve for its customers?

Kevin Riley: Sonus' customers fall into the following three general categories:

1) Service providers – Sonus provides telecommunications infrastructure to both mobile and wireline providers in support of service delivery and interconnection to partner networks.

2) Enterprises – Sonus provides secure termination and interworking of IP services on the enterprise premise

3) Over-the-top (OTT) service providers – Sonus provides solutions that enable delivery of OTT services over the Internet.

The key elements of the Sonus solution provide:
1. Security to protect service delivery from denial and theft of service,
2. Interworking that ensures interoperability and extends service reach, and
3. Policy in support of business workflows to enable automated, dynamic decision-making on IP flows

Sonus addresses the issues discussed above by taking an end-to-end solution focus for service delivery. Our portfolio consists of multiple elements that provide value on their own but when deployed in concert with each other provide a holistic solution for real-time communications in networks that no other vendor can offer.

In particular, Sonus' Network-as-a-Service (NaaS) IQ technology provides a highly granular, automated, and dynamic means for programming network policy and flow control. This technology is based on SDN principles and effectively enables network policy that adapts in real-time to ensure that all flows are delivered with the SLA that they require. It also provides a key connection point between the application and the network layer. In the past, applications had wants and needs of the underlying network but were unable

to orchestrate the network. NaaS IQ is the network control plane that bridges the gap between the application and the network delivery infrastructure.

Sonus' SBC technology is the anchor point for session control, security and interworking for real-time communications. Sonus SBCs protect real-time communications infrastructures, provide interworking across disparate technologies - which is common in both enterprise and service provider domains, and manages and enforces policy for real-time traffic. Real-time communications are most taxing of IT infrastructure and demand a high service level agreement (SLA) for network transport. At the same time, real-time communications are often the application driving network congestion. The SBC session layer is a mission-critical application that benefits from the capabilities that NaaS IQ provides.

Nancy Leonard: What is unique about Sonus' solution?

Kevin Riley: The uniqueness of the Sonus approach is that we deliver a vertical solution via collaboration between the Sonus SBC and the NaaS IQ network control plane. The integration of these two layers, session and network control, effectively creates a platform that connects the application to the IP transport. We call this unified platform Sonus IQ. This results in proper prioritization and treatment of real-time traffic in a fully dynamic and automated way that is much more efficient than static traffic engineering.

As a complement to the above capabilities, Sonus' portfolio is both optimized on specialized hardware and available in pure software suitable for deployment in both virtual and cloud environments. The Sonus approach to delivering products in both of these domains is unique in that we provide a common application irrespective of deployment model.

Whether a customer chooses to deploy on Sonus hardware or pure software, the applications features, capabilities and provisioning are identical. This provides a level of investment protection and low-friction migration that is unique in our industry.

In summary, Sonus is the only vendor in the industry delivering a platform that connects the application layer to a dynamic network policy engine that seamlessly supports hardware-based and software-based deployment models.

Nancy Leonard: Who will Sonus be in the future?

Kevin Riley: Sonus will be the service delivery platform for the cloud. Applications will attach to the Sonus IQ platform and request policy that is then programmed and enforced in the network. This platform will ensure applications realize the quality and security they demand and ensure that the end user experienced is maximized while optimally using network resources.

Nancy Leonard: What about Sonus are you most proud?

Kevin Riley: Sonus has successfully called and executed on key technology transitions in our industry. We have led the industry in the transitions from Time-Division Multiplexing (TDM) to IP, to pure IP delivery models, and we are now leading the industry and our customers to cloud-based services. While our customer demographics have expanded significantly since the inception of the company, our culture is based on delivering mission-critical infrastructure in networks that cannot fail and must evolve over many years. This mindset is a core piece of the Sonus DNA that has served us well as we branch into new customer and product categories.

Within engineering we have a no-comprise approach to product development. Our performance numbers are unqualified and the solutions are engineered to take on increasingly complex workloads without having to de-rate performance.

In short, I am most proud of the fact that we have moved early on key technology disruptors in our industry and that when I speak to customers, we have a product portfolio that I know will perform and evolve for 10+ years in their networks.

Nancy Leonard: What is Sonus' most significant challenge moving forward?

KevinRiley: We are at a very disruptive point in time in the IT space. Cloud, hosted service models and UC are moving at a pace I have not witnessed in our industry in the past. Business models are changing, and the key stakeholders who make technology decisions are also evolving. It is no longer sufficient to engage the owner of network infrastructure at an enterprise or service provider. The application owners must be engaged and buy into the technology transformation.

Additionally, network vendor decisions should no longer be made per network function as there are significant synergies to be had when these various functions collaborate. Our challenge is to identify the decision makers in this new model and evangelize the synergies that the Sonus platform delivers across multiple network elements.

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Nancy Leonard: What is your single most immediate mission-critical initiative?

Kevin Riley: There are not proven recipes and best practices for moving IT applications to the cloud. The technologies and procedures are nascent and evolving.

Our most important initiative is to stay close to the technology and customer leaders in this space to build the story through collaboration. It is not possible for a technology provider like Sonus to singlehandedly dictate a solution for the industry.

Nancy Leonard: Most companies say that they can do a lot of things – almost anything. Explicitly what has Sonus decided *not* to address at this point?

Kevin Riley: Sonus has decided to focus on the delivering a platform focused on connecting the application to the end-user. We have decided that this is our proper place in the network stack. A key decision that we have made is to not develop applications and higher level service brokering. We are 100% focused on bridging the gap between this segment and the network delivery layer. This positions us as non-threatening to the very customers that we want to integrate with and serve.

Nancy Leonard: Describe Sonus in three words.

Kevin Riley: Trusted. Leading. Fearless.

To continue this discussion with Kevin, Nancy, and your professional colleagues, check out the on-line version at Webtorials.

About Kevin Riley

Kevin has been instrumental in the Sonus' efforts to drive an industry leading technology roadmap, including the award winning Sonus SBC SWe (software edition) Session Border Controller and Sonus SBC 7000 Session Border Controller, the most successful new product introduction in Sonus' history. Riley will continue to drive Sonus' innovation and development activities, with particular focus on enabling Software-Defined Networking (SDN) and Network Functions Virtualization (NFV) cloud-based architectures of the future.

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