

# OEM SOLUTIONS STREAMLINE TELECOM NFV

For telecom customers trialing its virtual session border controller, based on network functions virtualization (NFV), Ribbon turned to Dell EMC OEM Solutions for a turnkey platform



Telecommunications

United States

## Business needs

With its telecom customers wanting to deploy a virtual session border controller (SBC) in their networks, Ribbon sought a turnkey NFV platform to serve as a high-performance hosting infrastructure capable of high packet throughput, low latency and scalable audio transcoding.

## Solutions at a glance

- [OEM Solutions](#)
- [PowerEdge servers](#)  
- [PowerEdge R740, powered by Intel® Xeon® Scalable processors](#)
- [ProSupport Plus](#)

## Business results

- Ensures optimal application performance
- Disruptive scalability for media transcoding
- Streamlines procurement
- Accelerates time-to-market
- Simplifies customer support
- Frees development resources

*“We can always count on the high-performance platforms we need today and well into the future from the OEM solutions that Dell EMC can provide.”*

**Bryan Hill**  
Vice President, Engineering, Ribbon

Like many industries, telecom has widely deployed virtualization in many areas of operations. In recent years, service providers have worked to take that further with network functions virtualization (NFV), aiming to decouple many network services—routing, firewalls and session border control, chief among them—from the underlying proprietary hardware that traditionally had provided them. NFV has become one of the industry's biggest trends toward greater operational efficiency and cost savings.

An industry leader in providing NFV software solutions, Ribbon has moved many of its telecom application products off its own hardware platforms, so customers can host them on virtual machines using a hypervisor on commercial off-the-shelf (COTS) servers. Ribbon's applications can operate on an OpenStack private cloud infrastructure in service providers' data centers or even on public clouds, such as Amazon Web Services. This versatility provides its customers with tremendous deployment flexibility.

The company's Session Border Controller Software Edition (SBC SWe) enables secure, real-time communications in private or public clouds. It uses the same code base and provides the same resiliency, media transcoding and security as the company's SBC 5000 Series and SBC 7000 Session Border Controller products, which come packaged in its own hardware appliances.

## Changing how telecom plays the game

According to Bryan Hill, vice president of engineering at Ribbon, price-performance advancements in computing power, coupled with the emergence of public, private and hybrid cloud models, have transformed what's possible, making the company's solution an evolution of the proprietary appliance model. "The appliance model made sense years ago, but with COTS hardware and cloud platforms, the game has changed," he says. "Now we can focus more resources on software development, which is where most of our solutions' value has always been."

Although the company optimized its SBC SWe application to run on virtual machines that use either VMware or KVM hypervisors, customers can choose whatever hardware they want to run it on. For customer trials where VMware has been selected, Ribbon provides its application with an underlying hardware stack using VMware, from the Dell Technologies family of companies, running on Dell EMC PowerEdge servers.

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Bryan Hill  
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Dan Teichman  
Senior Solutions Marketing Manager, Ribbon

Ribbon’s trial solutions are shipped to a customer’s lab aboard the PowerEdge R740, powered by Intel® Xeon® Scalable processors. They also feature optional NVIDIA graphic processing unit (GPU) cards that offload compute-intensive, media-transcoding chores from the servers’ CPUs.

“Efficient, high-scale transcoding is one of the keys to our application’s performance, which is why we chose the Dell EMC PowerEdge servers with Intel Xeon processors and NVIDIA GPUs,” Hill explains. “The hardware’s architecture and price-performance are unbeatable.”

## Streamlining procurement, configuration and support

To drive success for proofs of concept or network trials, Ribbon turned to the Dell EMC Original Equipment Manufacturer (OEM) Solutions for Telecommunications program. This program focuses exclusively on meeting the needs of companies supporting telecom service providers for powerful hardware platforms. If virtualization is needed, Dell EMC PowerEdge servers can come with VMware Embedded, pre-installed for OEMs, plus OpenStack and other solution components, including those from highly regarded third parties.

Hill recalls that the company’s long-term relationship with Intel led to a timely introduction to Dell EMC. “Our appliances have long used powerful Intel chips, so our Intel association goes back 10 years or more,” he says. “Most recently, as we migrated to NFV, we’ve used Intel’s Data Plane Development Kit and its Integrated Performance Primitives tools for extremely efficient packet processing.”

The Dell EMC OEM Solutions team provided Ribbon with a wide range of strategic assistance, from architectural advice to streamlining procurement, configuration and support. “We got into detailed architectural discussions with both the Dell EMC OEM team and their VMware colleagues about performance, bottlenecks and other concerns we had,” Hill says. “In turn, Dell EMC also brought in NVIDIA technical experts and other third parties, such as a major networking partner, to help us work through any NFV issues.”

Hill adds that having VMware Embedded means the vSphere hypervisor comes pre-installed on the Dell EMC PowerEdge servers, so there is one less step in prepping Ribbon's trial packages for customers. What's more, Dell EMC ProSupport provides additional peace of mind. "We can focus more on installing and optimizing our application on a virtual machine when the hypervisor comes pre-installed as part of a turnkey trial package for our customers' labs," Hill says. "It also simplifies procurement and support by having one bill of materials and one source for support, if needed."

## Accelerating customer NFV migrations

When Ribbon's Senior Solutions Marketing Manager Dan Teichman talks about the telecom industry's NFV transformation, he describes his telecom customers as being under boardroom directives to migrate their networks to more efficient and lower cost operational models as fast as possible.

"Of course, major migrations like NFV require months of evaluation and testing of applications like ours before they can determine if virtual implementations can fully replace existing solutions based on proprietary hardware that may have served them for years," Teichman says. "But we can save our customers substantial time in their testing and verification by delivering our SBC application on a powerful Dell EMC PowerEdge server with VMware vSphere aboard."

Both Hill and Teichman consider the Dell EMC OEM Solutions for Telecommunications program to be an invaluable strategic relationship that goes far beyond that of a technology supplier. As Hill explains, "We can better plan our solutions for best-in-class performance by knowing where the hardware and software stacks of Dell EMC, VMware and their industry-leading partners like Intel and NVIDIA are going.

"As we become more and more of a software-only company, we know we can always count on the high-performance platforms we need today and well into the future from the OEM solutions Dell EMC can provide."



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