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The Navigator for Enterprise Solutions

VIRTUALIZATION SPECIAL

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20 Most Promising Virtualization Solution Providers - 2017

Virtualization has become the key technology underpinning 'cloud-era' IT infrastructure and continues to draw attention from enterprises worldwide given the apparent cost benefits and flexibility that it provides. The capacity to set up virtual instances of servers, applications, desktops, networks, and storage devices helps decrease hardware dependence while delivering optimum manageability and scalability. Further powering the improvement in business processes is the increasing use of software-defined data centers (SDDC), virtual desktop infrastructure (VDI), and hyper-converged hardware in modern IT infrastructure.

One of the latest trends covering grounds in the virtualization space is the increasing adoption of network functions virtualization (NFV) by enterprises. Initially, telecom operators were the primary propagators of NFV, but the market for NFV is now spreading out to enterprise cloud and internet service providers. In tandem, the industry has also witnessed a growing potential in deconstructed VDI which takes the resource layer

out of the VDI stack while allowing users to mix and match various hosting environments to fit their requirements best. The result is higher flexibility in terms of the resource layer thereby augmenting end-user productivity and making the datacenter future-proof.

IT teams may still be coming to grips with virtualization in a number of businesses, but the technology is here to stay and is unquestionably the future of business IT. The market today abounds with virtualization solution providers armed with best-of-breed technologies that can help companies implement proactive ideas to tackle urgent challenges. To help CIOs navigate this flourishing landscape, a distinguished panel comprising CEOs, CIOs, VCs, industry analysts and CIOReview's editorial board has reviewed the top virtualization solution providers and shortlisted the ones that are at the vanguard fulfilling the urgent demands of the industry.

We present to you CIOReview's "20 Most Promising Virtualization Solution Providers - 2017."



Company:
Napatech [FRA: NAT]

Description:
The company has developed an NFV SmartNIC solution that helps accelerate virtualization performance and flexibility in a cost-effective manner

Key Person:
Henrik Bril Jensen
CEO

Website:
napatech.com

Napatech

Reimagining NFV with Reconfigurable Computing

Though NFV was introduced in 2012, it has proven to be a challenge to implement on standard computing platforms using virtualization. Even cloud companies have realized this and have investigated other types of technologies and techniques, resulting in the adoption of containers, and DevOps models as well as FPGA-based reconfigurable computing. While each generation of FPGAs looks more promising for building high-performance computing applications, there is one company—Napatech—that is pioneering the application of reconfigurable FPGA technology to accelerate Network Functions Virtualization (NFV) performance. The company has developed an FPGA-based NFV SmartNIC that delivers performance, flexibility and cost-efficiency in virtual environments. The Napatech NFV SmartNIC supports multiple acceleration solutions for virtualized environments and leverages the programmability and reconfigurability of FPGAs to extend the lifetime of the NFV NIC and server hardware.

For over a decade, Napatech has been enabling network management and cyber security appliance vendors to develop their solutions on standard computing platforms like x86 servers.

“We provide the necessary FPGA-based hardware and software based on our in-depth knowledge of packet capture, FPGA

technology and server architecture to enable a maximum throughput performance solution,” says Henrik Brill Jensen, CEO, Napatech. Since then, Napatech has become the de-facto standard for packet capture and has the most comprehensive feature list, all designed to help improve the performance of the client appliance. Moreover, the company has solutions that can provide performance packet capture with up to 800 Gbps. This includes features to nanosecond time-stamp packets, classify packets, identify flows, provide insight into tunneled traffic, extensive filtering capabilities and almost 2 dozen methods for defining flows so that they can be distributed in a balanced fashion to the available processing resources in the server. Napatech is bringing this knowledge, expertise, and capabilities to the virtualization space enabling various virtual functions to achieve high performance with standard computing platforms.

As an expert in FPGA-based solutions and server architectures, Napatech is uniquely positioned to enable high-performance virtualization solutions. With a portfolio of solutions to fit various needs, Napatech ensures that when applications run on servers or virtual infrastructures powered by Napatech solutions, they get the right data, at the right time in the right place. “The approach we have taken is to focus on FPGA-based reconfigurable computing solutions, where the emphasis is not on the hardware, but on the software that makes it easier for our customers to benefit from the power of FPGAs without having to be experts or get lost in the details of what still is a complex technology to master,” notes Brill Jensen.


The Napatech customer base includes several tier 1 equipment vendors and cloud

service providers that depend on Napatech technology to optimize and accelerate their network management and security solutions. While explaining the value proposition of Napatech in the virtualization landscape, Brill Jensen highlighted a case study with Nokia. Nokia required a solution that could compress data files at 40 Gbps. Performing the compression in software required 40 CPU cores or effectively an entire server. With hardware offload to the NFV SmartNIC, Napatech was able to demonstrate 40 Gbps file compression with 30 times faster compression time using only a single CPU core.

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Today, the lion’s share of Napatech business is based in the US. Brill Jensen expects this to continue to be the case and based on current demand expects even higher engagement in the North American region. “For now we are focused on expanding beyond our traditional base of providing packet capture solutions to appliance vendors to bring the benefits of reconfigurable computing to all IT organizations that would like to benefit from the power these solutions offer,” concludes Jensen. 



Henrik Brill Jensen