Array NETWORKS

AVX Series Network Function Platforms Streamline NFV to Deliver Agility-at-Scale

Purpose-built hardware, virtualization and software-centric computing combine to create a shared network environment with guaranteed performance.

resources with other VMs, as well as running on generic compute, memory and I/O that is not optimized for these specialized functions.

Network Functions Virtualization (NFV) presents its own set of problems – while it offers great promise in service chaining and orchestration, it is notoriously difficult to configure,

These factors combine to leave IT managers with a difficult, if not unfair, choice – sacrifice agility and pay much more to achieve performance objectives with dedicated appliances, or sacrifice performance to gain agility with virtual appliances..

Performance vs. Agility

As data centers continue to grow in both complexity and expectations, networking and security professionals are increasingly looking to gain agility through software-centric approaches and consolidation. However, for critical network and security solutions – like ADCs, NGFWs, SSL VPNs, IDS/IPS and web application firewalls, for example – the virtual environment presents challenges.

Hardware-based appliances offer high performance and throughput, but require much higher space, power and cooling expenditures. Virtual appliances deliver agility, but suffer in performance due to shared

Delivering Agility-at-Scale

Array AVX Series network functions platforms are a new type of solution designed to address these challenges by providing guaranteed performance for virtualized network functions through dedicated CPU, SSL, memory and I/O resources, while preserving the agility of virtual appliances, and streamlining NFV deployments – in short, agility at scale. The AVX Series is an open platform that supports Array virtual ADC and SSL VPN functions, as well as other best-of-breed 3rd-party virtual appliances such as NGFWs, IDS/IPS, DDoS protection, and web application firewalls.

The Agility of Cloud & Virtualization

The AVX Series network functions platform delivers the flexibility of private cloud virtualized infrastructure, with flexible sizing, functions, orchestration and pay-as-you-go consumption. The AVX Series supports entry-level, small, medium and large instances, so only the resources needed by a given function need be assigned. Instance sizes can be mixed and matched – for example, assign an SSL VPN VA that is used only for occasional remote logins to an entry-level instance, while assigning a load balancer VA with heavy traffic to the highest-performing large instance. The AVX Series also allows pay-as-you-grow consumption – just add licensed networking and security VAs up to the system's capacity. Array's eCloud RESTful API and OpenStack plug-in provide an extensible interface for cloud management, orchestration and automation systems to manage and monitor Array AVX Series platforms and hosted Array VAs.

The Performance of Dedicated Appliances

In addition to guaranteed compute, memory, I/O and SSL resources per instance, the AVX Series also dedicates separate resources for hypervisor management – fully segregated from hosted functions – to eliminate resource conflicts. This combination can lead to a multifold increase in performance of 3rd-party VAs over that seen in traditional virtual environments.

Taking the Guesswork Out of NFV

Network functions virtualization has been notoriously difficult to implement correctly. Array's network functions platform abstracts the complexity associated with virtual and physical port mapping, CPU pinning NUMA boundary settings, SR-IOV and drivers, thus taking the guesswork out of NFV deployment. In addition, sourcing and configuring SR-IOV ports is streamlined via an easy-to-use, integrated graphical interface.

Platform Ecosystem

Array's fast-growing ecosystem for best-of-breed 3rd-party networking and security solutions offers the assurance of technologies that are compatible with the AVX Series network functions platform. Detailed, step-by-step deployment guides available for many ecosystem products allow IT staff to deploy with confidence.

Superior Economics & Value

Through the AVX Series network functions platform, data center managers can reduce costs associated with space, power and cooling by consolidating up to 32 one-rack-unit dedicated appliances into just two rack units. In addition, efficiency can be improved through service chaining and orchestration, and reliance on costly hardware can be minimized.

AVX Series Benefits

> Hosts Array virtual ADCs and SSL VPNs as well as best-of-breed 3rd-party VAs such as virtual Web application firewalls and NGFWs

> Four instance sizes: entry, small, medium and large, to support varying performance needs with the ability to mix-and-match sizes and fine-tune resources if needed

> Dedicated CPU and SSL cores, memory and I/O per VA to ensure both high performance and guaranteed performance

> Management and hypervisor overhead segregated from processing resources to assure performance of instances

> Each VA is fully independent to ensure separation required for compliance and high-security environments

> Pay as you grow by adding licensed VAs up to system capacity

> Streamlines NFV and SR-IOV deployment through abstraction and easy drag-and-drop interface

> Provides unmatched price-performance with the lowest cost per SSL TPS on the market

> Significantly reduces infrastructure costs compared to dedicated hardware appliances or general-purpose virtualized servers

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For more information about how Array Networks can help you consolidate network and security functions, streamline NFV deployments and consolidate data center resources, visit us at arraynetworks.com or send us an email at sales-info@arraynetworks.com.