

# CHECK POINT + ADVA

## VIRTUAL CPE SHOWCASE

### Benefits

- Protect networks with a leading security solution and a proven and reliable Network Interface Device (NID)
- Combines several virtualized networks hosted on an integrated server
- On-demand instantiation of software appliances for efficient resource utilization
- Conserves space and power consumption
- Uses open source OpenStack software for efficient management and ease of integration

### INSIGHTS

To date the delivery of managed business services has relied upon the deployment of a variety of physical devices to provide a range of required services. These Customer Premise Equipment (CPE) or network edge functions can include customer routing, firewalling, Network Address Translation (NAT), multi-layer network and service monitoring, Wide Area Network (WAN) acceleration and optimization among others. The deployment of many separate physical appliances requires initial planning, delivery, and field resources to rack and power up the appliances. Once installed these devices have ongoing costs associated with the consumption of rack space and power plus maintenance and upgrades.

Network Functions Virtualization (NFV) allows for dedicated hardware appliances to be replaced by software running on standard servers. These servers may be installed in data centers or can be integrated into the network. NFV at the edge collapses several CPE functions onto a single device using software instances instead of separate physical appliances.

### NETWORK DEMARCATION AND NFV

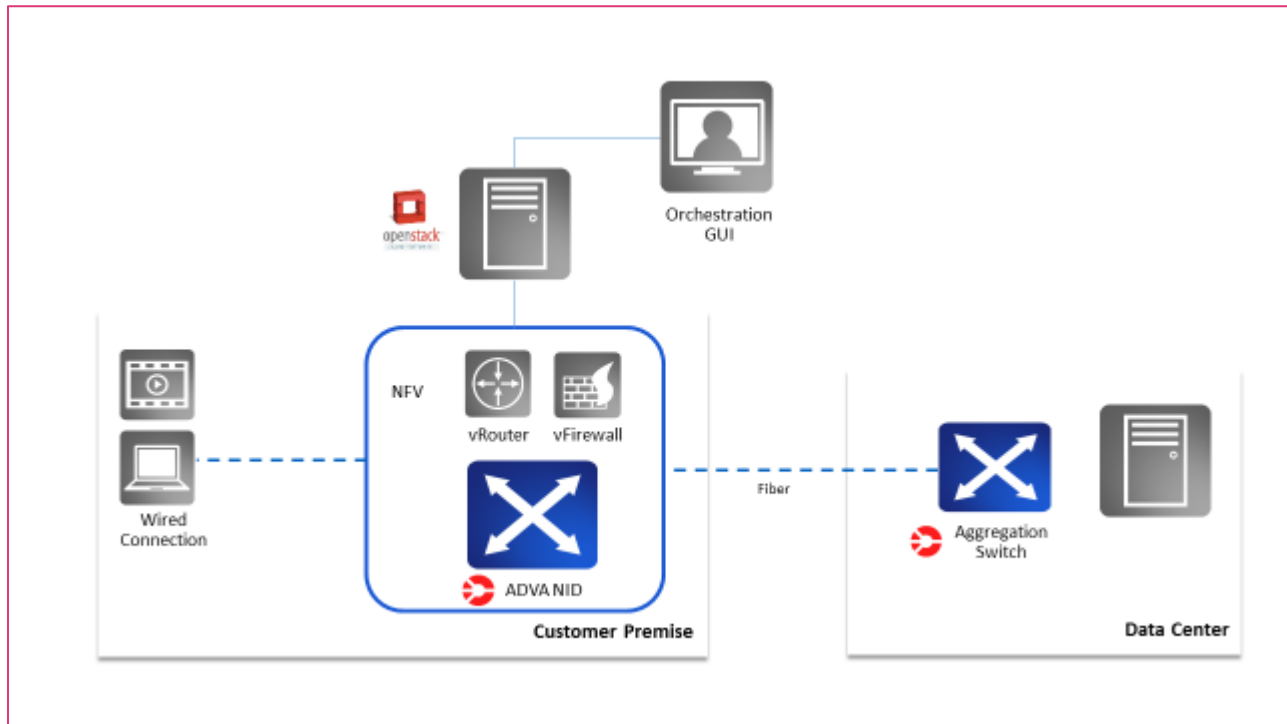
ADVA is a leading supplier of Ethernet Network Interface Devices (NID) which are extensively deployed and typically used as a Communication Provider demarcation device. With the emergence of NFV, the feature set of the successful NID portfolio is further extended.

Network monitoring functions provided by dedicated hardware such as routers, may not be available in the future, as the software appliances operate at different sites. In addition, data which was processed locally prior to the introduction of NFV may now be transported over public networks. Those changes require a more sophisticated network termination. NIDs will need to provide additional functionality such as encryption, higher layer Operations, Administration and Maintenance (OAM) or open programmability.

Software appliances can be operated in the demarcation device using built-in servers which are optimized for packet processing and which can host multiple Virtual Machines (VMs). Each VM can in turn host a Virtual Network Function (VNF). These VNFs can be chained together to create rich service offerings.

## VIRTUAL CPE DEMONSTRATION

As early as in 2013 ADVA Optical Networking demonstrated the potential of integrating server and storage resources with demarcation devices at the Mobile World Congress. At the MPLS and SDN World Congress 2015, ADVA Optical Networking, with its technology partners Brocade and Check Point, showcases a virtual Customer Premise Equipment (vCPE) solution that can host a variety of virtual network functions. The setup demonstrates removal of a physical routing appliance on the customer premises and its replacement with a software-based, virtual router interconnected with a hosted firewall.



## ABOUT CHECK POINT

Check Point Software Technologies Ltd. ([www.checkpoint.com](http://www.checkpoint.com)), is the largest pure-play security vendor globally, provides industry-leading solutions, and protects customers from cyberattacks with an unmatched catch rate of malware and other types of attacks. Check Point offers a complete security architecture defending enterprises' networks to mobile devices, in addition to the most comprehensive and intuitive security management. Check Point protects over 100,000 organizations of all sizes. At Check Point, we secure the future.

## ABOUT ADVA

ADVA Optical Networking's FSP 150 Carrier Ethernet access portfolio is a market-leading solution for business Ethernet services, wholesale Ethernet access infrastructure and mobile backhaul. Programmability and hosting of virtualized network functions enables efficient network virtualization for many applications and provides operators with multiple opportunities to enhance performance and cost structure of their networks. For more information, visit [www.advaoptical.com/](http://www.advaoptical.com/).

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