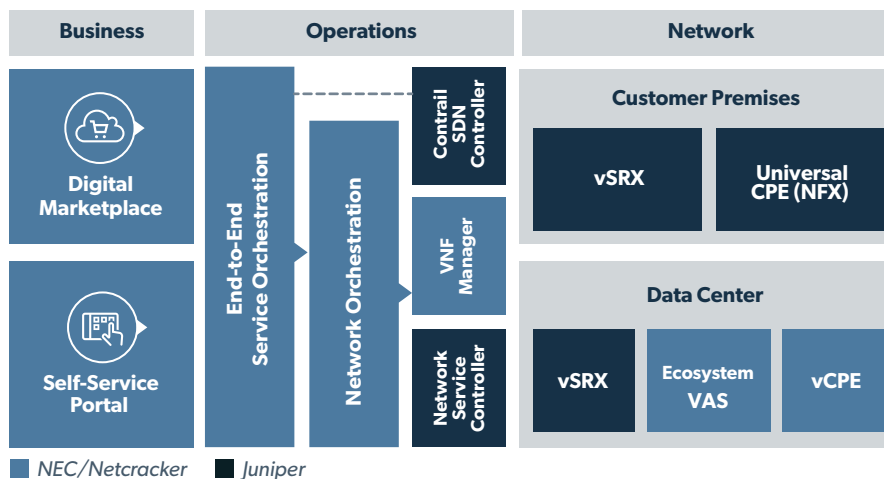


### NEC/Netcracker NaaS Solution Use Case

## Accelerate Time-to-Market with Virtual CPE and Value-Added Enterprise Services from NEC/Netcracker and Juniper



As more enterprises turn to the cloud, the network services providing essential connectivity, routing, security and bandwidth on demand need to transform. Complex premises-based CPE, which contributes to long lead times and escalating IT costs, will be replaced by on-demand value-added services accessed through self-service portals.

Virtualized CPE (vCPE) solutions open up new revenue opportunities for service providers in the fast-growing B2B market by fundamentally changing how services are delivered and consumed. This is one of many use cases available from NEC/Netcracker NaaS.

## Solution Overview

NEC/Netcracker and Juniper have partnered to provide a complete solution for moving CPE functions and value-added services to an SDN/NFV cloud model.

The solution is based on NEC/Netcracker NaaS, an end-to-end environment for quickly creating, deploying and monetizing new services for the B2B market. NEC/Netcracker NaaS encompasses hybrid network and service orchestration, a built-in revenue enablement layer, pre-integrated VNFs and an SDN Controller from Juniper, bringing all of the services together into an on-demand digital marketplace.

Depending on the application and its performance requirements, a virtualized service can be placed in the data center (centralized model) or on the customer's premises (distributed model).

- Centralized services leverage the vCPE from NEC/Netcracker in combination with Juniper's vSRX (virtual security appliance) and are located in the data center. Only a 'thin CPE' is needed on the customer's premises. Centralized services typically include WAN optimization controllers, routers, NAT, firewalls and VPN services, with resources efficiently shared among different customers.
- Distributed services use Juniper's NFX, a universal CPE located at the customer premises. NFX hosts critical value-added services that stay local in the enterprise in order to guarantee high resiliency and performance and to provide perimeter security to the customer site. Because the hardware is not shared among customers, it provides more flexibility and isolation, allowing services to be deployed in real time.

With these foundational components in place, the real value of virtual CPE is enabling new value-added services, especially security-related services, to be deployed faster and more easily. Juniper vSRX provides a comprehensive suite of high performance security VNFs that can be deployed on the customer's premises or in the data center, depending on the needs of the application and business.

### Key Challenges

As service providers enable new cloud delivery models for B2B network services, they need to:

- Operationalize and commercialize vCPE services at scale without disrupting legacy BSS/OSS.
- Reduce the time it takes to deploy and activate new virtualized services.
- Move up the value chain beyond providing basic network connectivity and VPNs.

### Solution Value

The vCPE solution from Juniper and NEC/Netcracker enables service providers to:

- Reduce time-to-market by up to 80%.
- Deploy value-added services that are ready to be monetized.
- Implement an Agile environment to accelerate innovation and improve service offerings.
- Gain access to expertise and tools to close operational gaps quickly, reducing opex by up to 40%.

# Solution Benefits

- > Reduce time-to-market for new on-demand services by up to 80%.**  
 Generate revenue and meet diverse market needs by adding services such as next-generation firewalls and threat management offerings to more basic VPN and routing services. All VNFs from Juniper are pre-integrated with NEC/Netcracker NaaS, which means service providers can reduce the time it takes to bring those services to market by up to 80 percent.
- > Activate new service bundles in a few clicks.**  
 Deploy an intuitive and user-friendly self-service portal that enables customers to activate value-added services in only a few clicks. The unified digital marketplace combines pre-integrated VNFs with cloud applications to offer service bundles with greater value.
- > Reduce operational and maintenance expenses up to 40%.**  
 Close operational gaps quickly with our expertise in managing physical and virtualized functions across multiple technology domains, license management, automated service lifecycle management and BSS integration. Leverage more cost-effective CPE and a fully automated service delivery process to minimize the number of necessary truck rolls, onsite maintenance and installation activities.

## A sample of pre-integrated services ready to go

Next-Generation Firewall Services		Unified Threat Management	Threat Intelligence Platform		
Application Control & Visibility		Anti-Virus	Botnets/C&C		
Intrusion Prevention		Web/Content Filtering	GEO-IP		
User-Based Firewall		Anti-Spam	Custom Feeds & APT		
Foundational Services					
Access Interface	VRF/Routing Domain	DHCP	Service Chaining	CG-NAT	

## Summary

Deploying virtual CPE with value-added services is one of many use cases available from NEC/Netcracker NaaS. The same solution can be expanded to incorporate additional services using our extensive digital marketplace of VNFs and IT/cloud applications for different markets, such as SD-WAN, residential vCPE and WAN optimization, all leveraging NEC/Netcracker's large ecosystem of partners. After delivering the first service, implementing additional services is even faster with our agile processes.

Discover more at [www.netcracker.com/naas/](http://www.netcracker.com/naas/)

## About Juniper Networks

Juniper Networks challenges the status quo with products, solutions and services that transform the economics of networking. Our team co-innovates with customers and partners to deliver automated, scalable and secure networks with agility, performance and value. Additional information can be found at Juniper Networks ([www.juniper.net](http://www.juniper.net)) or connect with Juniper on Twitter and Facebook.



## About NEC/Netcracker

NEC/Netcracker SDN/NFV Solutions is the joint initiative between NEC Corporation and Netcracker Technology to address the opportunities associated with software-defined networking (SDN) and network functions virtualization (NFV) for service providers of all sizes around the world. The combined NEC/Netcracker entity brings together the best of NEC's network innovation with Netcracker's IT leadership and telecom expertise to deliver comprehensive, end-to-end cloud and virtualization solutions in multidomain environments. [www.netcracker.com](http://www.netcracker.com)