

# IP Infusion Open SD-Edge Platform

## Powered by DANOS-Vyatta edition

### Overview

Enterprises are undergoing digital transformation driven by widespread outsourcing of IT infrastructure, accelerated adoption of cloud services, motivating the need for secure connectivity, and ever-present demands for overall cost reduction. This is opening a new window of opportunity for communications service providers (CSPs) and managed service providers (MSPs) to offer high-value add managed services to enable this transition.

The Open SD-Edge platform has been optimized for cloud connectivity, at the branch and cloud edges of the network, and delivers operational simplicity, agile, virtualized services at the highest price-performance and lowest total cost of ownership.

Powered by DANOS-Vyatta edition, Open SD-Edge solutions are available as a Virtualized Network Function (VNF), and a flexible set of white box hardware, backed by carrier grade support. Three target Open SD-Edge use cases are supported (see Figure 1):

### Virtual SD-Edge

- Virtual Router to build and manage enterprise-class networking services and VPN technologies for the public and private cloud or data center.

### Branch SD-Edge

- Secure branch office connectivity and cloud migration

### Universal SD-Edge

- Secure enterprise/branch connectivity at the data center or cloud with options to add new services from a list of qualified virtual network functions

Open SD-Edge solutions are built on a common DANOS-Vyatta edition (DVE) NOS platform, which is based on the Linux Foundation DANOS open source Network Operating System, the only open source, carrier-focused NOS platform. AT&T has broadly deployed DVE in thousands of devices for both fixed and mobile networks.

The common Open SD-Edge disaggregated platform replaces multiple fixed format appliances (see Table 1), significantly reducing CapEx and OpEx, without compromising control plane functionality. In addition, Open SD-Edge platforms may readily capitalize on Best of Breed technologies up and down the stack. The solution is managed through highly scalable and agile Cloud-Managed Services that streamlines operations.

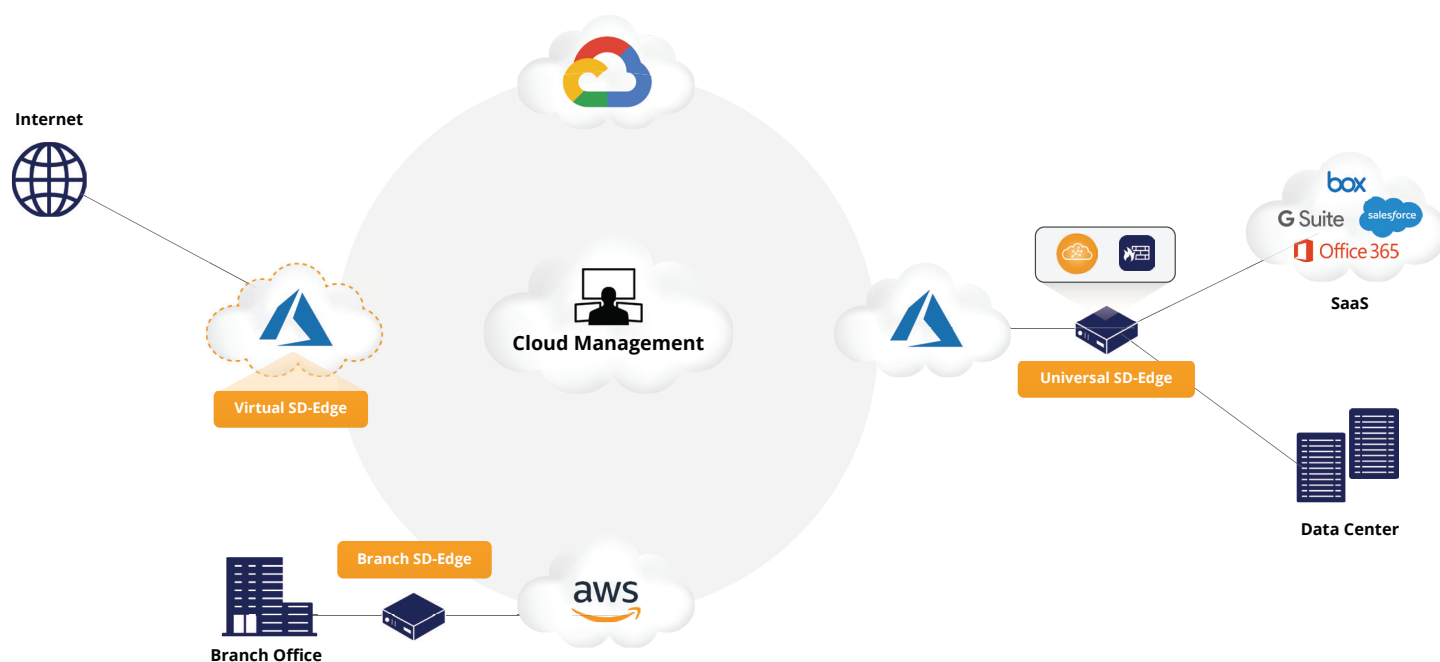
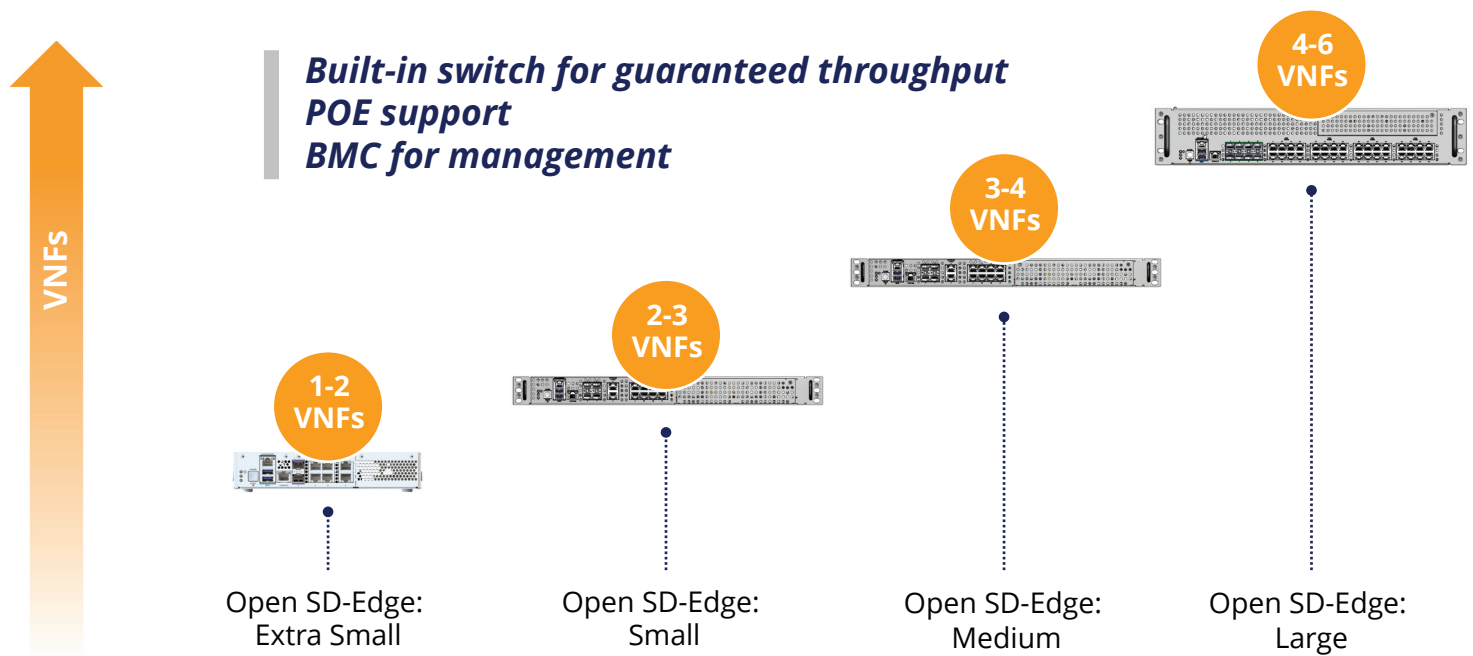


Figure 1: Open SD-Edge Cloud Use Cases

	DISTRIBUTION	ROUTING	SECURITY	INTERFACES	VNFS
VIRTUAL SD-EDGE	Public cloud marketplace and VNF	vRouter with CG-NAT	VFirewall VPN	N/A	N/A
BRANCH SD-EDGE	VNF & Host NOS on a White Box*			1 – 10 Gpbs	
UNIVERSAL SD-EDGE	Host NOS on a White Box*		3rd party security VNFS	3rd party VNFS available	

Table 1: Open SD-Edge solutions are available in a flexible set of form factors

\*Available White Box configurations are shown in Figure 2.



**Figure 2:** Open SD-Edge offers a range of white box hardware to span from the edge to the Cloud.

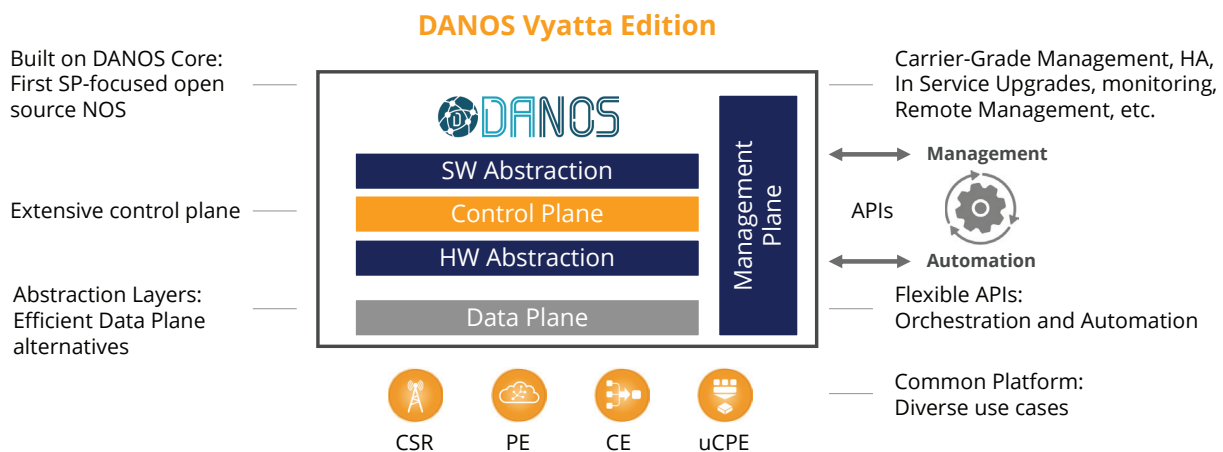
## Benefits

- Flexible platform enabling virtualized services for the **multi-cloud environment**
- Common, open platform that replaces multiple appliances, **streamlining operations** while reducing CapEx and OpEx
- Disaggregation offers **best-in-class services and technologies**, backed by IP Infusion's Advanced Network Services featuring **24x7 support**
- Highest Price-Performance enables **greater revenue producing services**
- Proven DANOS-Vyatta edition NOS platform ensures that disaggregation **does not compromise control and management plane functionality**

## DANOS-Vyatta edition

Open SD-Edge leverages DANOS-Vyatta edition (see Figure 3), built upon DANOS – the industry’s first open source NOS project focused on enabling managed services. DVe also features IP Infusion’s control plane, which provides unparalleled protocol support available in a common, disaggregated platform. DVe has been widely deployed in AT&T’s production network for multiple white box use cases.

DVe provides IPv4/IPv6 dual-stack addressing, broad L2-7 support, an integrated, full-featured firewall, which enable a range of diverse use cases, CG-NAT functionality and WAN traffic monitoring , along with extensive OAM support to ensure carrier-grade service availability. DVe has an optimized software forwarding plane geared for higher performance on standard COTS server.



**Figure 3:** DANOS-Vyatta edition (DVe) Benefits

### FOR MORE INFORMATION:

For more information about the **Open SD-Edge platform** and solutions, visit [www.IPInfusion.com/uCPE](http://www.IPInfusion.com/uCPE) or contact your IP Infusion sales representative.

### ABOUT IP INFUSION

IP Infusion, the leader in disaggregated networking solutions, delivers enterprise and carrier-grade software solutions allowing network operators to reduce network costs, increase flexibility, and to deploy new features and services quickly. IP Infusion is headquartered in Santa Clara, Calif., and is a wholly owned and independently operated subsidiary of ACCESS CO., LTD. Additional information can be found at <http://www.ipinfusion.com>

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