

# Software Define Your Enterprise WAN with Virtual Network Services



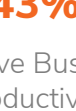
Convergence of **SD-WAN**, **SDN**, and **NFV** technologies is enabling businesses to realize the value of a dynamic **WAN**

## Top 3 Business Drivers for Digital Transformation in 2021



**(44%)**

Optimize IT Resources



**(43%)**

Improve Business Productivity



**(41%)**

Improve Customer Experience

Businesses today need to minimize the risk of interruptions to their business and gain flexibility to quickly adapt to changing conditions. Investment in technology is more critical now than ever as it is key to ensure continuity of operations and business agility.

Source: Frost & Sullivan's 2021 SD-WAN End User Survey

## 3 Things WAN Must Be

As businesses across verticals embrace hybrid cloud, IoT, remote working, edge and other technology trends it is imperative to ensure the WAN being used is:

**Flexible**

**Agile**

**Highly secure**

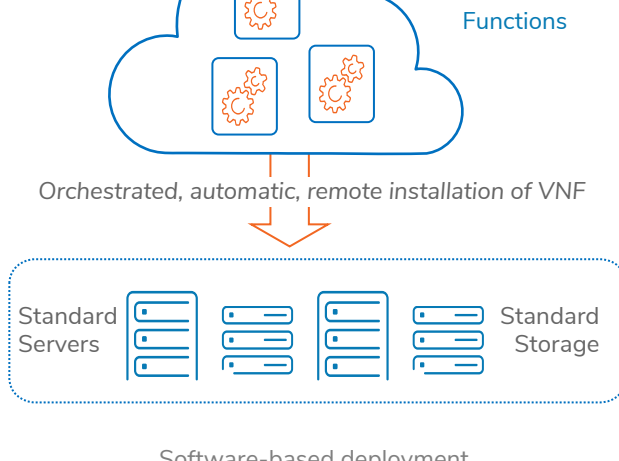
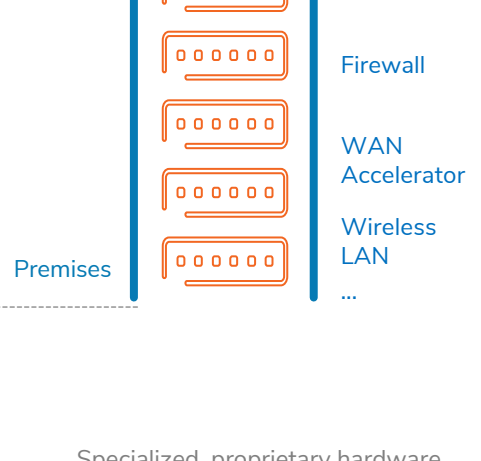


Source: Frost & Sullivan's 2021 SD-WAN End User Survey

## Network Function Virtualization Explained

Traditional Network Appliance Approach

Network Function Virtualization Approach



Specialized, proprietary hardware  
Physical install per appliance per site  
Complex network management

Software-based deployment  
Multiple functions on common hardware  
Less complexity, better performance, lower cost

Source: Frost & Sullivan

## Benefits of NFV-based Virtual Network services:



Enhanced control over networking functions



Dramatically improved provisioning cycle times



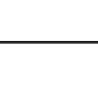
Deployment of new applications and services in a matter of hours or days



Improved WAN efficiency



Reduced operational costs



Ability to deploy enhanced security features in a modular fashion

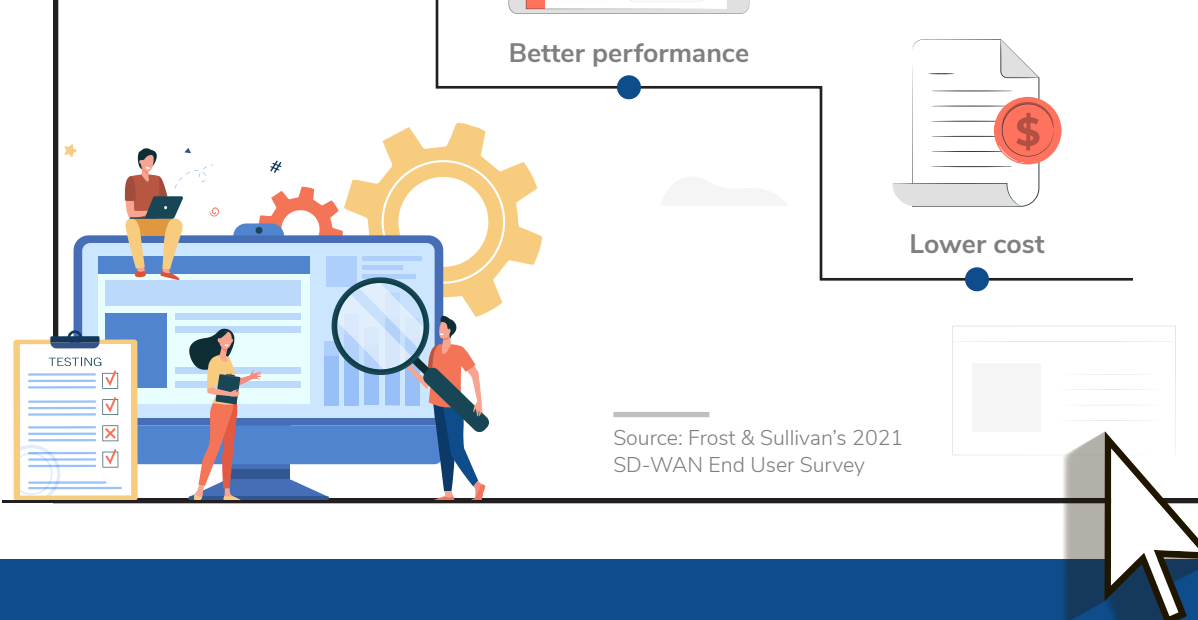
Catalog-based multi-vendor approach offers superior VNF choices for enterprises.

### In a Nutshell

Less complexity

Better performance

Lower cost



Source: Frost & Sullivan's 2021 SD-WAN End User Survey

## Trends Driving the Need for Virtual Network Services

### 1. Businesses Ramp Up Digital Strategy Efforts

The Covid-19 pandemic forced many businesses to deploy technologies to optimize resources, increase operational efficiency, and enhance business continuity.

VNF dramatically reduces hardware costs.

The software-centric approach enables VNFs to be instantiated effortlessly making it easy to deploy and manage network functions.



### 2. Rise in SD-WAN Adoption

The North American SD-WAN market revenues exceeded \$2 billion in 2020, with more than 200,000 operational sites.

To fully realize the potential of a software-centric architecture, WAN functions must be agile.

Deploying an uCPE, including SD-WAN, addresses WAN virtualization holistically.



### 3. Hybrid Cloud Networking

uCPE offers the agility and flexibility to deploy VNFs at all key connection points for hybrid cloud: on-premises data centers, colocation data centers, cloud POPs, and at the edge.



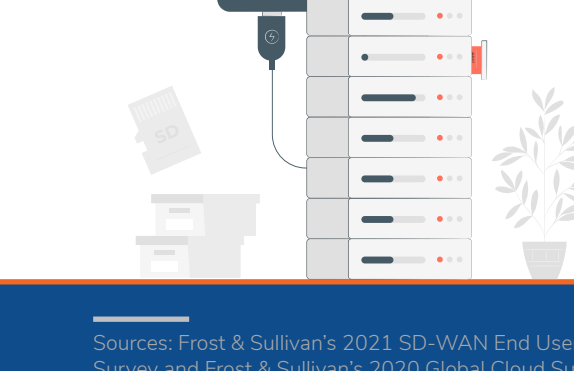
### 4. Enhance Global Competitiveness through Fast Deployment

With virtual network services, businesses have a cost-effective way to test new markets before investing CAPEX in branch locations.



### 5. Multi-vendor approach provides wider choices

The software-centric architecture not only brings great agility for VNF deployment, but also brings immense flexibility and choice for businesses during vendor selection.



Sources: Frost & Sullivan's 2021 SD-WAN End User Survey and Frost & Sullivan's 2020 Global Cloud Survey



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