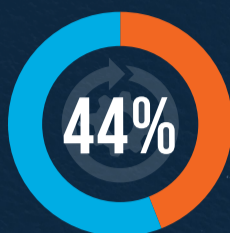# SOFTWARE DEFINE YOUR ENTERPRISE WAN WITH VIRTUAL NETWORK SERVICES
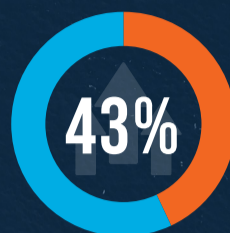
The convergence of SD-WAN, SDN, and NFV technologies enables businesses to realize the value of a dynamic WAN
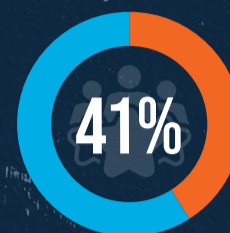
TOP 3 BUSINESS DRIVERS FOR DIGITAL TRANSFORMATION

44%
Optimize IT Resources

43%
Improve Business Productivity

41%
Improve Customer Experience

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

THREE WAN REQUIREMENTS

As businesses across verticals embrace hybrid cloud, IoT, remote working, edge, and other technology trends, it is imperative that the WAN they are using is:
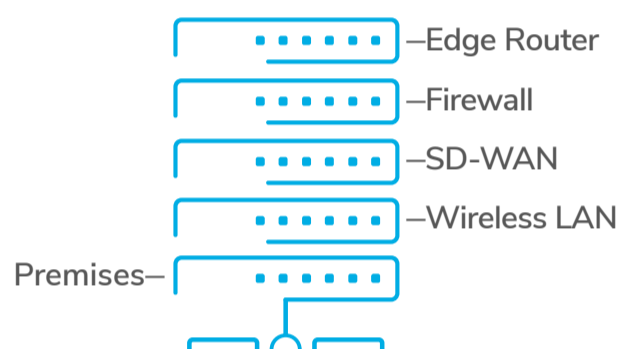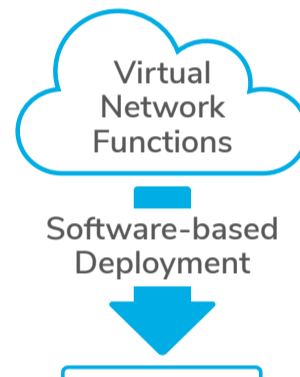
■ AGILE ■   ■ HIGHLY SECURE ■   ■ FLEXIBLE ■

Traditional Approach vs. NFV Approach

Traditional Network Appliance Approach

— Edge Router
— Firewall
— SD-WAN
— Wireless LAN
Premises —

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

Network Function Virtualization Approach

Virtual Network Functions

Software-based Deployment

- Specialized x86 hardware platform
- Multiple functions on a single device
- Less complexity, lower cost

BENEFITS OF NFV-BASED VIRTUAL NETWORK SERVICES

- Enhanced control over networking functions
- Improved WAN efficiency
- Dramatically improved provisioning cycle times
- Reduced operational costs
- Enhanced security features deployed in a modular fashion
- Speedy deployment of new applications and services in a matter of days
- New catalog-based multi-vendor approach for superior VNF choices

IN A NUTSHELL

Virtual network services = Less complexity, better performance, lower cost

TRENDS DRIVING THE NEED FOR VIRTUAL NETWORK SERVICES

Pandemic
The pandemic forced many businesses to deploy technologies that would optimize resources, increase operational efficiency, and enhance business continuity.

➤ VNF dramatically reduces hardware costs.

➤ The software-centric approach enables VNFs to be instantiated effortlessly, enabling network functions management on the go.

Rise in SD-WAN Adoption
The US SD-WAN market revenues exceeded $2.7 billion in 2021, with more than 280,000 operational sites.

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

➤ Deploying a uCPE platform that can host multiple VNFs, including SD-WAN, addresses WAN virtualization holistically.

Hybrid Cloud Networking
Businesses prioritize investing in hybrid and multi-cloud services for their distributed IT infrastructure to manage multiple locations globally.

➤ 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 edge.

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.

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

Learn about AT&T Network Functions Virtualization
https://www.att.com/nfv