5 Key Trends Driving Enterprise Networking and How Telcos Can Capitalize

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Digital Transformation Requires Network Transformation

5 Key Trends Impacting Enterprise Networking

The Teleco Opportunity: How SPs can Enable Advanced Networking

Essential Guidance for Selling to the Enterprise
Digital Transformation Journey

Platforms & Communities
“Innovation @ Scale”
- AI
- IoT
- Blockchain
- Natural Interfaces

New Technologies & Delivery Model
“IT Access @ Scale”
- Cloud
- Mobile
- Social
- Big Data

MULTIPLIED INNOVATION
We Are Here

2007 2015 2023 ...

EXPERIMENTATION

Autonomous Systems
“HyperComplexity @ Scale”
- Exponential AI
- Quantum Computing
- BioDigital Integration

We Are Here
IT Transformation Requires Network Transformation

Network is a foundational layer for enabling secure, scalable and efficient use of Cloud, Edge and IoT Applications
Network Requirements Continue to Expand

- Fast, and adaptive
- Capacity, on-demand
- Edge-to-Cloud Latency
- Network-level security
- Analytics capable of yielding new insights and driving DX
- Bridge cloud and telco domains
- Global reach
5 Key Enterprise Networking Trends

1. COVID-19 & Enterprise Networking: Signs of Optimism
2. Growth of cloud-managed enterprise networking, and the teleco opportunity
3. SD-WAN continues rapid adoption as evolution to SD-Branch begins
4. Network Visibility & Analytics become foundational to optimize user/application experience
5. ML & AI enhance advanced network automation
Flattening the Curve
How Tech Builds Business Resiliency and Enables Agility

BUSINESS FOCUS

BUSINESS CONTINUITY
COST OPTIMIZATION
BUSINESS RESILIENCY
TARGETED INVESTMENTS
FUTURE ENTERPRISE

FLATTEN THE CURVE

COVID CRISIS
ECONOMIC SLOW DOWN
RECESSION
RETURN TO GROWTH
THE NEXT NORMAL

ECONOMIC SITUATION

© IDC
COVID Sent More Than Half of Workers Home; Almost 1/3 Will Stay At Home in 2021

What percentage of your employees were working from home **before COVID**, what percent are **working from home now**, and what percent do you anticipate will be working from home in **2021**?

- **Before COVID**: 6.3%
- **Now**: 52.7%
- **In 2021**: 29.8%

But 70% of organizations say less than half of employees are using VPN

What % of WFH employees are using VPN?

- 75-100%: 12%
- 50-75%: 17%
- 25-50%: 40%
- 0-25%: 31%

Source: U.S. COVID-19 IMPACT ON IT SPENDING Survey (Survey conducted during 21st May to 28th May period), IDC, May, 2020
COVID-19: Enterprise networking buyers become more optimistic on investment plans

Q. Compared to your original plans, in 2020 how do you think your organization’s actual spending on network equipment products and services will be affected due to COVID-19?

8.7-point decrease in respondents planning to decrease spending
6.6-point increase in respondents planning to increase spending

Source: IDC Global Pulse Survey
Network Investment Priorities: Automation and Remote Management

Q. In which of the following areas, if any, will your organization increase investments as a result of new business operations that are required because of COVID or in a post-COVID world?

% Respondents Increasing Investments due to COVID-19

- Increased reliance on advanced automation platforms to reduce the manual management of the network: 48%
- Increased ability to remotely manage network operations: 46%
- Increased ability to ensure secure access to enterprise applications: 46%
- Increased usage of a cloud-based platform for managing the network: 43%
- Increased visibility and analytics related to users, devices and applications on the network and their performance: 41%
- Increased reliance on software-defined networking technologies across the network: 41%

Source: IDC U.S. Future Proofing Enterprise Networking, June 2020; n=254
Cloud-managed enterprise networking & the teleco opportunity

Cloud-based & Crowd-sourced

Improve Day 1 Implementation

LAN, WAN, WLAN, IoT Edge

Cloud-managed networking benefits for enterprises:

- Full lifecycle management
- Dynamic scalability
- Faster access to new features
- Shift to Networking as a Service (NaaS)

Cloud provides opportunity for telecos to cohesively manage bundle services:

- SD-WAN + LAN (wired and wireless) + Security
- Value-added services, such as location-based geo-mapping
- Enables multi-tenancy, increasing scalability
SD-WAN Evolution to SD-Branch Begins

WAN Op ➔ Hybrid WAN ➔ SD-WAN ➔ SD-Branch

### SD-WAN
- Transport agnostic
- Manage app rather than device
- Agile delivery

### SD-Branch
- Integrated management of WAN + LAN
- On-demand services
- Automated control/management

Virtual functions:
- Routing
- UTM/Firewall
- WLAN
- WAN optimization
- Network Analytics
- SBC
95% Will Deploy SD-WAN; Positive perceived benefits of WAN + LAN Management

Q. Does your organization currently use or plan to use SD-WAN technology solutions?

- Currently deployed: 41,8%
- Plan to deploy in the next 12 months: 40,2%
- Plan to deploy in the next 12-24 months: 12,8%
- No plans to deploy in next 24 months: 5,2%

What advantages, if any, do you see with SD-WAN technology that integrates with enterprise networking needs (wired and/or wireless)?

- Consistent management of user and device, application and security policy across LAN and WAN: 56,7%
- Easier deployment and management of the WAN because of integrations with the LAN: 42,9%
- Ability to set application quality of service levels between the LAN and WAN: 41,6%
- Centralized creation of policies across the LAN and WAN: 40,2%
- I don’t see any advantage of having SD-WAN technology that integrates with the enterprise/campus network: 0,6%

Strong Interest in SD-WAN + Security

Q. What features do you believe are required of a next-generation, or second-generation SD-WAN 2.0 platform?

- More integrated security (such as next-generation firewall, deep packet inspection, URL filtering, etc.) - 30.1%
- Ability for the SD-WAN platform to provide robust network and application performance management and assurance features - 28.3%
- Ability to manage the deployment from a centralized or cloud-based platform - 24.1%
- Ability for the SD-WAN platform to support an SD-Branch/vCPE deployment - 23.9%

As enterprises deploy SD-WAN, they're looking for security services to be bundled in directly:
- E.g. NGFW, DPI, IPS/IDS

SD-WAN + Security = SD-Branch

Wireless, Security, Management/Monitoring are top functions bundled with WAN

What percent of your branch office networking and security functions will be virtualized in the future?

- In 2 years: 33%
- In 5 years: 58%

Does your organization use any of the following technology or value-add services that may be bundled with the WAN service?

- WLAN: 51.6%
- Firewall / Next-gen Firewall / UTM: 50.7%
- Network Management/ Monitoring: 49.7%
- WAN Optimization: 46.2%

Network Analytics & Visibility become foundational to optimize user/application experience

Network analytics and visibility are foundational for:

- **Assure end-user & app experience**
- **Quickly identify & remediate network performance or security issues**
- **Network architecture design**

Visibility & analytics give telcos the data to automate and optimize management of enterprise networks

**Top IT/Network challenges point to need for heightened analytics and automation**

- Security threats: 45%
- Modernizing or automating IT management: 38%
- Constraints on IT budgets, skills, or time: 35%
- Incorporating new/emerging technologies: 34%
- Strategic alignment of IT with business: 34%
- Regulatory compliance or data protection: 33%
- Network transformation: 31%
- Device and end-user management: 29%
- Inadequate service from IT/network providers: 25%

Source: IDC U.S. Enterprise Communications Survey, Sept. 2019
Benefits of AI/ML-enhanced automation and intelligent network operations include:

- Automated provisioning and elastic scalability
- Closed-loop remediation of performance or security incidents
- Better alignment with business objectives & assuring outcomes
ML/AI-Enhanced Enterprise Network Operations Automation

- **AI-powered network operations create self-healing networks**
  - System monitors operations
  - Detects performance degradations
  - Determines root cause
  - Automatically remediates the problem before it impacts users

- **AI-powered Helpdesk Automation**
  - User Interfaces leverage Natural Language Processing for queries
    e.g. Q: Why is my Wi-Fi coverage weak on the fourth floor?
    A: Switch to the 2.5Ghz Band

- **Automated QoS and App Performance Guarantees**
  - Operator specifies minimum quality of service levels, system automatically maintains those in real time
  - Resources are spun up to ensure and maintain service levels
The Teleco Opportunity

- **COVID:** Enterprises are making targeted investments to support “new normal” operations. Offer remote, outsourced management, with bundled support for remote workers.

- **Cloud-managed networking:** Leverage cloud-managed multi-tenant platforms for delivering integrated services to enterprises.

- **SD-Branch:** Enterprises are looking to cohesively manage network + security and integrated WAN + LAN services.

- **Network Analytics:** Visibility & Analytics assure performance, provide guaranteed SLAs; reduce time to identify, remediate issues.

- **ML/AI-Enhanced Management:** As complexity grows, manual management will not suffice. Rely on ML/AI automation to scale.
Networking is a key enabler of DX, which is spurring Network Transformation. Align investments with business goals.

Enterprises are looking to more cohesively manage their networks across domains, especially WAN + LAN.

Cloud-managed, advanced automation and bundled value-add services are keys to ensuring teleco success.

Consider "as a Service"/Flexible Consumption models for delivering network services to enterprises.
Thank you

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