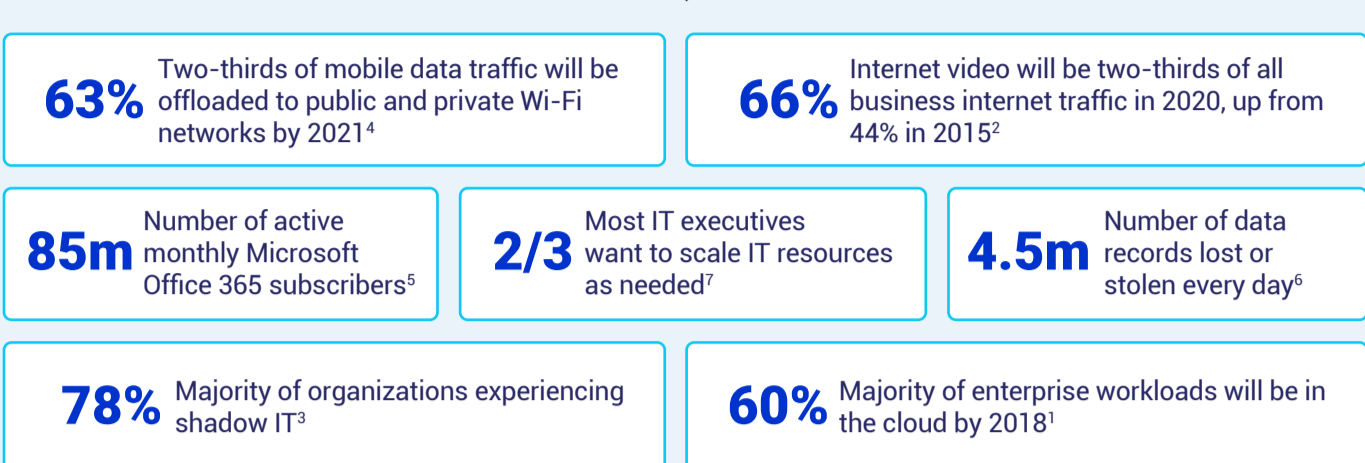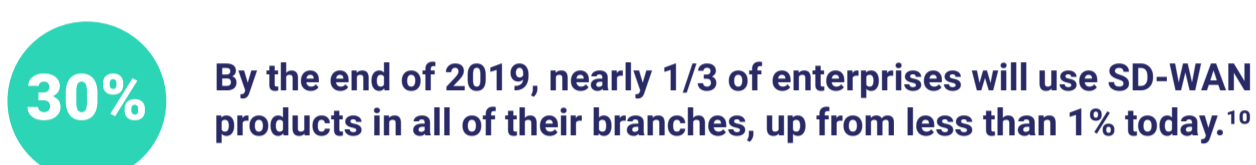# NTT

SD-WAN:
A network fit for business

The corporate network is facing unprecedented pressure from the growth of cloud, mobility, voice, and video traffic. And with companies increasingly decentralized, branch office networks are becoming more complex and expensive to scale and secure. The result is spiraling network costs, poor end-user experience, increased security risks, and a management nightmare.

63% Two-thirds of mobile data traffic will be offloaded to public and private Wi-Fi networks by 2021[4]

66% Internet video will be two-thirds of all business internet traffic in 2020, up from 44% in 2015[2]

85m Number of active monthly Microsoft Office 365 subscribers[5]

2/3 Most IT executives want to scale IT resources as needed[7]

4.5m Number of data records lost or stolen every day[6]

78% Majority of organizations experiencing shadow IT[3]

60% Majority of enterprise workloads will be in the cloud by 2018[1]

An agile network

Enterprises are already adopting Software-defined wide area networking (SD-WAN) as a long-term solution for these network challenges. SD-WAN creates an overlay on an existing enterprise network, making it more flexible without the expensive and time-consuming challenge of ripping and replacing existing connections. It abstracts the control and configuration functions hardwired into network routers and switches, and redefining them in software.

USD 1.25bn global spending on SD-WAN products in 2020[8]

USD 6bn global spending on SD-WAN services in 2020[9]

30% By the end of 2019, nearly 1/3 of enterprises will use SD-WAN products in all of their branches, up from less than 1% today.[10]

Hybrid connectivity

SD-WAN unifies multiple network connections into a single virtual connection. It can aggregate 4G, MPLS, DSL and other connections at a single location to provide more bandwidth for a demanding application. This also makes the network more efficient by reducing or eliminating idle time on network links.

Combine multiple connections for better performance

Active-active set-up means better utilization

Manage networks centrally to improve efficiency and cost

2015 23% of all business IP traffic is IP WAN

**2020** 13% of all business IP traffic is IP WAN[11]

Intelligent path control

SD-WAN devices automatically route network packets along the most appropriate links to reflect network policies. Traffic that needs low latency can be routed along faster links, while less critical traffic can take a slower route.

Intelligent path control also allows businesses to route traffic quickly around network outages or congestion, switching between connection providers as appropriate to increase network reliability.
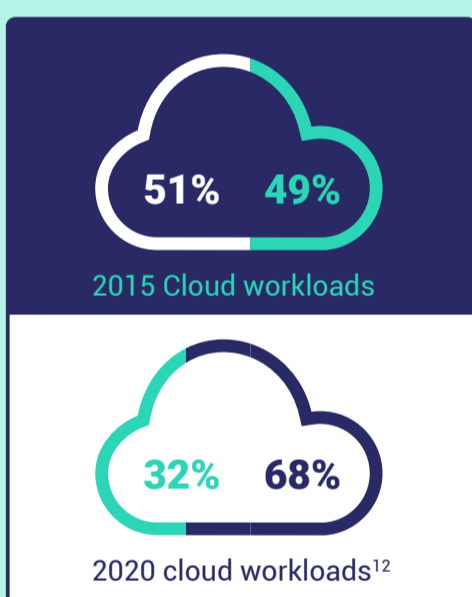
Plan most efficient route for cloud services
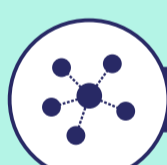
Route around network congestion

Identify and block suspicious behavior

51% 49% 2015 Cloud workloads

32% 68% 2020 cloud workloads[12]

Application optimization

SD-WAN administrators can optimize the network to support applications with specific needs. They can define rules to prioritize a low-latency video application, for example, or even dynamically adjust support for applications based on specific business conditions. This leads to improved user productivity.

Optimize voice and video for better collaboration

Support chatty apps over the Internet with proper optimization

Change business rules rapidly

250 milliseconds maximum average latency for good SAP performance[13]

150 milliseconds maximum average latency for good Skype for Business voice[14]

Secure all sites

An SD-WAN overlay network is designed from the ground up to be secure, so that traffic travelling across different third-party providers' network connections is safe from compromise. Administrators can set permissions for different applications centrally in accordance with defined policies.

Use internet safely and more effectively

Update security learning policies centrally

Use virtualized functions to secure branch offices

Network must evolve

SD-WAN is the latest step in the long-term evolution of the corporate network and will in time become much more applications centric, supporting uptime, performance and real-time routing.

SLAs guaranteeing application performance

Network-aware applications that configure their own routing

Real-time routing through machine learning

Find out how NTT can become a trusted partner in your move to a smarter networking future at hello.global.ntt

Disclaimer: The work described in this infographic was performed while the company was known as NTT Communications.

Sources: 1. Voice of the Enterprise: Cloud Transformation survey of IT buyers, 451 Research. 2, 4, 11, 12. Cisco Visual Networking Index, Cisco. 3. Ministry of No, NTT Communications. 5. Microsoft Teams rolls out to Office 365 customers worldwide, Office Blogs, Microsoft 6. 2016 Breach Level Index, Gemalto. 7. Cloud VPN & The Role of the Service Provider in Disrupting the VPN Market, AMI Partners. 8, 10. SDWAN Forecast and Opportunity: How They Will Disrupt the Router Market, Gartner. 9. Cloud and Drive for WAN Efficiencies Power Move to SD-WAN, IDC. 13. How to identify high network latency and bandwidth within SAP Cloud for Customers, Community Blogs, SAP. 14. Plan network requirements for Skype for Business 2015, Skype for Business blog, Microsoft.