

NTT Com India-Netmagic SD-WAN

Pushendra Kumar Trivedi, NTT Com India



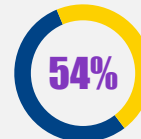
NETWORKING CHALLENGES

MANAGING
COMPLEX
NETWORK
ENVIRONMENTS



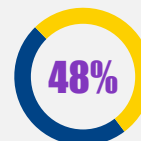
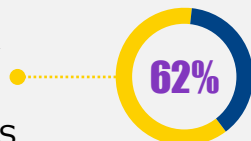
INEFFICIENT
BANDWIDTH
UTILIZATION AND
COST OPTIMIZATION

FEASIBILITY ISSUES
IN NETWORK
EXPANSION



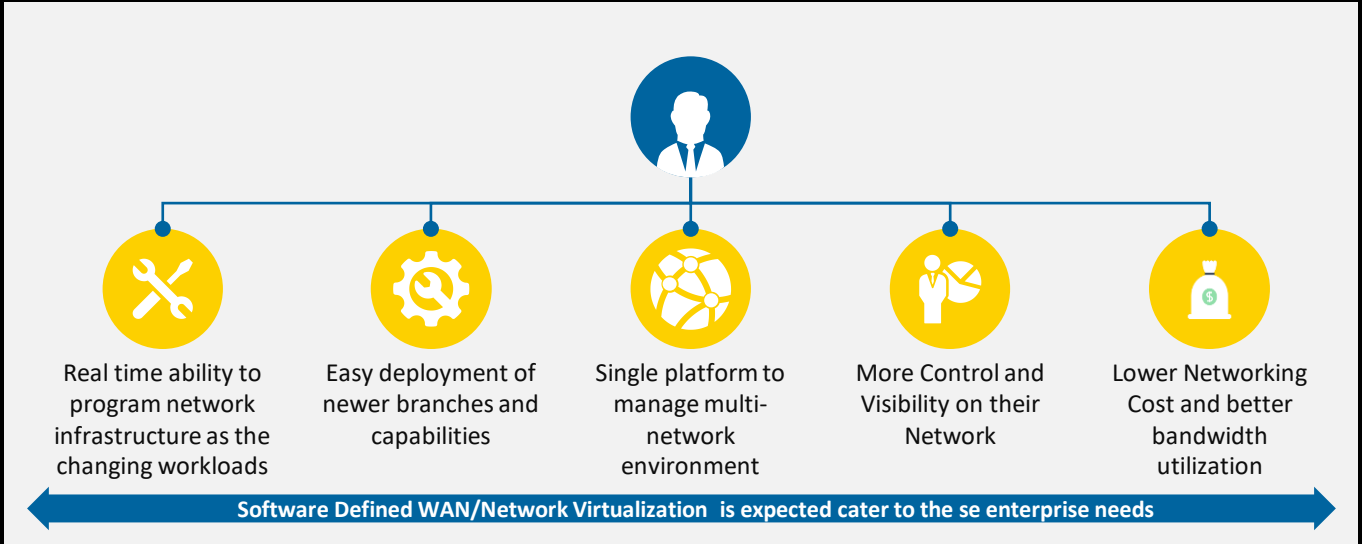
ENSURING SECURE
ACCESS TO THE
CLOUD

MANAGING
DEMANDS FOR
SCALING
BANDWIDTH
REQUIREMENTS



NETWORK UPGRADE
AND SUPPORTING
LEGACY
APPLICATIONS

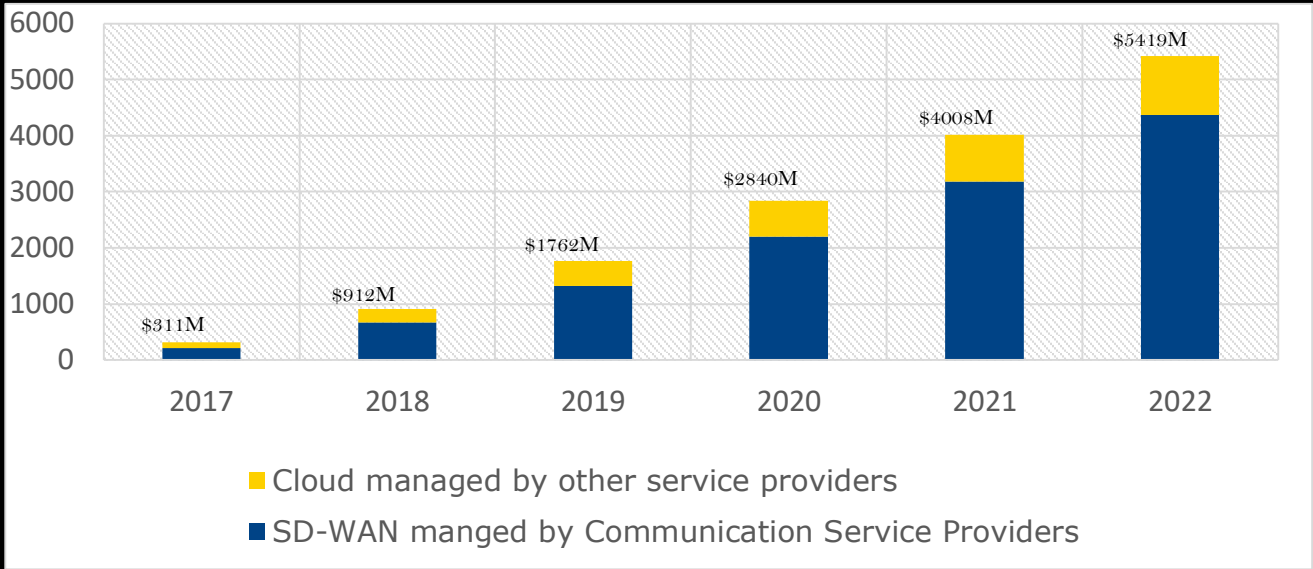
WHAT ENTERPRISES WANT?



GLOBAL SD-WAN MARKET



Millions (USD)



Year	2017	2018	2019	2020	2021	2022
SD-WAN managed by Communication Service Providers	218	666	1320	2204	3180	4372
Cloud managed by other service providers	93	246	442	636	828	1,047
	311	912	1762	2840	4008	5419

NTT SD-WAN SERVICE MODELS

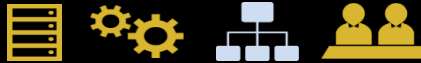


Network As Service



- For Organization who are looking for refreshing their environment and Get benefit of Managed Services also
- End to End Responsibility and SLA owned by NTT Communications

Bring Your Own Network



- For Organization that want to keep their Existing Network and Get Benefit of Managed Services also
- End to End Management can be done by NTT communications

Infrastructure Only



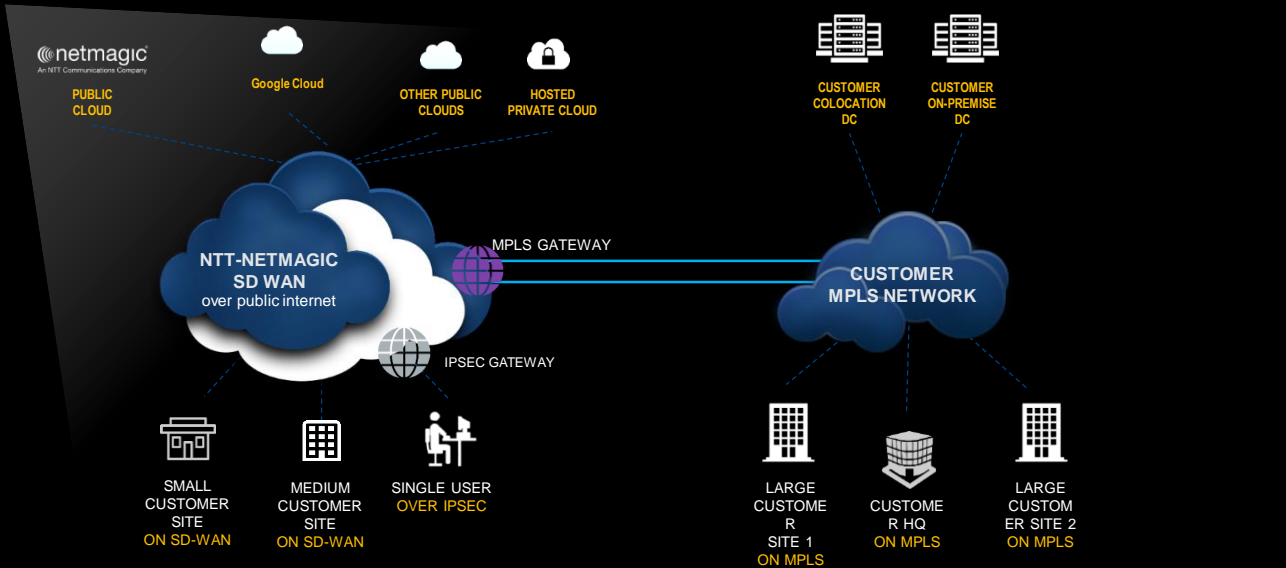
- For Organization who want to take advantage of SD WAN and Want to user **their** Current WAN vendors
- Organization have their own team or Third party for managed Services

SD-WAN



SINGLE DASHBOARD

PROVISIONING, MONITORING & MANAGEMENT
THROUGH A SINGLE PANE OF GLASS



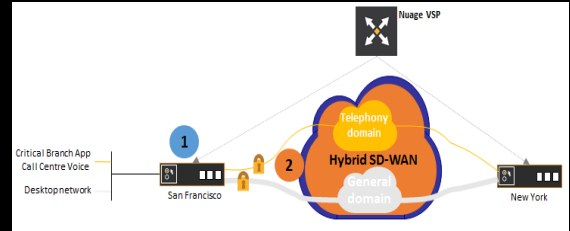
* Software Defined DC + Software Defined WAN + Managed Services

Use Cases



Industry Executive summary -

- Scale of connected and IoT devices involved in manufacturing
- Increase in supplier & partner echo system
- Adoption of cloud & SaaS & futuristic approach .



Challenges

- Network availability & performance at remote manufacturing unit.
- Manageability of Complex Network with Multicarrier Environment
- Limited IT Resources & network visibility
- Lack of Flexibility & Time to Market.
- Consolidation of ICT Services & Cost optimization.
- No network segmentation between supplier partner & business unit.



Solution

- Single Network & management console with Multi carrier Approach
- SD-WAN solutions, is able to isolate network segments based on process, business unit or department.
- Secure connect to cloud & SaaS
- AAR offers flexibility to utilize MPLS & low cost Broadband / Dongle optimally.



Business Benefits

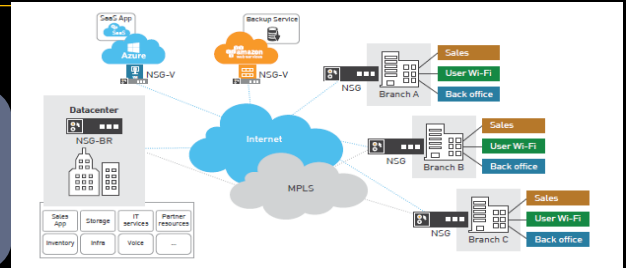
- Network no longer depend on specific Service provider feasibility & enterprise can leverage best of the transport technology solution available at branch.
- Network segmentation is biggest benefits for manufacturing industry. Allows you to restrict your supplier access and jeopardize integrity of your own network.
- Control dataflow & Growth in the number of manufacturing processes, applications is no more restriction.
- Improved network visibility & ease of operation through single management console.
- Overall cost optimization.

Netmagic – NTT Com SDWAN Manage service - Single SLA for SDWAN overlay & Network underlay architecture

RETAIL

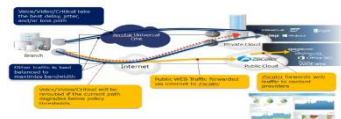
Industry Executive summary -

- Enterprises to get new stores up and running much faster than before
- Digital business transformation with Adoption diverse technology in Branch including RFID, smart signage, beacons, mobile POSs and video analytics etc.
- Adoption of cloud & SaaS
- Evaluating new security standards & approaches



Challenges

- Lack of centralized network visibility & management
- Reliable network & availability
- Compliance with payment-card-industry data-security standards (PCI DSS)
- Ensure optimal application performance
- No restriction between different user base – warehouse, supplier, credit card payment, retail outlet
- With cloud & SaaS adoption – secure access to cloud.



Solution

- Full network visibility with Single Network & console with Multi carrier Approach
- SD-WAN microsegment to offers isolation between zones – warehouse, supplier, credit card payment, retail outlet
- Secure VPN & unified policy framework extension to private & public cloud & SaaS
- Compliance with payment-card-industry data-security standards (PCI DSS)

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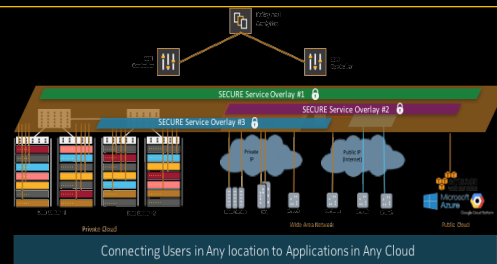


Business Benefits

- Reduces Extremely long WAN-circuit provisioning times from months to week.
- SDWAN offers flexibility to leverage low cost Broadband /Dongle along with MPLS .
- Segregation of user base offer ease of network scale
- Control dataflow & Growth in the number of manufacturing processes, applications is no more restriction.
- Improved network visibility & ease of operation through single management console.
- Overall cost optimization.

Enterprise IT Evolution Executive summary -

- Enterprise applications are moving to the cloud:
 - SaaS: O365, Salesforce, Gdocs,...
 - IaaS/PaaS for in-house Apps: using AWS, Azure, GCP, ... Any Cloud offering
- Evaluating options for secure connectivity to AWS, GCP, Azure, Tier1DC, App DC)



Challenges

- Workloads are distributed between private, public cloud & SaaS. Network is still passive to understand the workload movement.
- Secure Connectivity to public, private & SaaS is challenges.
 - MPLS is expensive to connect back to cloud.
 - open Internet has compliance & security issue
- WAN network is not intelligent to understand the workload movement.
- Optimal application performance to SaaS application



Solution

- SD-WAN seamlessly extend WAN into private or public cloud compute through NSG VM instance in cloud environment Ex- AWS, Azure cloud.
- SDWAN intelligent path control directly route traffic distributed workload.
- SD-WAN DPI identifies 2000s applications signature based on L7 information & provide optimal routing.
- Advanced service chaining** Redirect traffic into virtual or physical network functions for IDS/IPS; DLP; firewall; content filtering; media gateway/proxy
- 3rd Party VNF Orchestration & Hosting provides Flexibility & extended Security



Business Benefits

- Enhance use experience while accessing the workload hosted in private, public cloud & SaaS.
- SDWAN solution reduces the complexity & provide business continuity in distributed workload scenario.
- VNF provides extended security & optimization in network performance.
- Overall cost optimization through multi cloud and SDWAN strategy.

Thank You

