

NE-WAN(SDWAN)



Agenda



- About NeSecure Telecom Pvt. Ltd.
- Market Overview
- NeSecure Product & Services Portfolio
 - NE-WAN (SDWAN)
 - o IPv6 Transition
- NE-WAN Case Study

About : NeSecure Telecom Pvt. Ltd.



- NeSecure Telecom Pvt. Ltd. founded in 2019 to take forward the Flagship Product NE-WAN (SDWAN), to different Geographies of Globe.
- A Make In India SDWAN Service Portfolio.
- As on date we manage 150+ customers across India in various segments like Microfinance, Banking, Logistics, Retail, IP Surveillance, Telecom and ISP, etc.
- NeSecure's products are built for the Large, Small & Medium Enterprise, Retail, and WFH connectivity with the highest standards of security, performance, and scalability.
- NeSecure Telecom Pvt Ltd is headquartered in Pune, India with a presence in multiple locations across India.
- We are transforming network connectivity across the globe with future proof to accelerate digital journey for everyone in the world. And while doing that, our vision is "Tech_To_All" with added advantage of cost effectiveness.



Market Overview



- The Global SD-WAN market size is projected to reach US\$ 5220.9 million by 2028, from US\$ 995.2 million in 2021, at a CAGR of 32.7% during 2020-2030.
- As enterprises in India are gearing up to adopting SD-WAN services to alienate the prohibitive costs, complexities, accelerate cloud adoption. To accommodate an ever-increasing mobile work force, there is an impending need arising from the MSPs to automate and manage SD-WAN service life cycle across multiple SD-WAN solutions and underlay networks.





NE-WAN











Sample Solution Architecture









NE-Controller : Management Plane for NE-Edge devices.

Features

- Orchestration
- Zero Touch Provisioning
- Multi-Tenant Support
- Geo Mapping of Devices
- On-Cloud / In-Premise deployments
- Configuration Backup and Restore
- Central Configuration Management
- Edge Devices WebUI/CLI access
- Template Based Configuration

- Compliance Management
- Vulnerability Assessment
- RBAC
- Real-time monitoring & Reporting
- Notifications & Alerts
- SLA Reports
- Histograms
- Audit Logs



NE-Edge

NE-Edge are a range of Cellular/ Non Cellular CPEs Powered by NE-OS firmware.

- NE 05
- NE 15
- NE 25
- NE x40
- NE x60
- NE x80

Features

- Multi-Fabric Support
- Throughput Upto 2500 Mbps
- Rugged Industrial Casing (IP-53)
- High speed Dual-Band Wi-Fi

NE-OS is a IPv6 Ready Network Operating System with Enterprise features

NE-OS

Features

- WAN Aggregation
- Static/Dynamic Routing
- Application Aware Routing (1500+ Applications)
- Encrypted VPNs (IPsec/Wiregaurd/OpenVPN/AnyConnect/FortiVPN/ GRE/EoIP/IPIP/VXLAN/MPBGP4/EVPN etc)
- Zone Based Stateful Firewall
- IPS / IDS (Cloud based) with DDoS protection
- URL Filtering
- MultiVRF Support
- QoS



Orchestrator



nesecure	Ξ				🔅 🌜 NE-Admin 👤	Home / Orchestrator / Authenti	cation Pending	
ashboard	Home / Orchestrator					Authentication	on Pending	
☐ Monitoring	Customer List Bulk Upload	emplate Configuration Aut	hentication Pending					
Ш Мар			g			MAC ID	$\uparrow \downarrow$ Description	¢1,
🛱 Firmware Upgrade				Customer List -	···· •			
Reports					+Add Device	C8:EE:A6:43:CB:56	NE-05	Approve
🛗 Audit Logs						F8:5E:3C:1F:74:84	NE-15	Approve
$ ot\!\!\!/$ Bulk Configuration \vee	Device Name	↑↓ MAC ID	^↓ Status	↑↓ Description	↑J.	C8:EE:A6:43:CD:F4	NE-05	Approve
م User Configuration						C8:EE:A6:43:CB:7C	NE-05	Approve
() Tapant Configuration	FIS_Bandhan_Sahararhat_C706	C8:EE:A6:43:CD:FC	Active	NE-05		F8:5E:3C:1C:1A:60	NE-15	Approve
	FIS_Bandhan_Chandpur_C810	C8:EE:A6:43:C9:1A	Active	NE-05		C8:EE:A6:41:6F:3F	NE-13	Approve
	Ecom_LNW_Lunawada	C8:EE:A6:43:CE:0C	Active	NE-05		d0:93:95:30:56:61	NE-15	Approve
	Ecom_KDW_Kurduwadi	C8:EE:A6:43:CD:F2	Active	NE-05				
	Ecom_PoC_Router_NE-15	F8:5E:3C:1F:79:CC	Active	NE-15				



NE-WAN

Controller



Dashboard

NESECURE	=			neAd	
	Home / Dashboard				
	Heatmap	DOWN SITES			
	Coine Coline		Down Since [↑] Device ↑ Duration [↑]		
			02/05/23, 14:42 ADBF_Chind	wara 41d 2h 19m	
			09/01/23, 13:09 ADCC_Benod	ia 154d 3h 52m	
	493		09/01/23, 13:09 AHM_Ahmed	abad 154d 3h 52m	
			09/01/23, 13:09 AHV_Vastrap	ur 154d 3h 52m	
			20/01/23, 18:14 AKA_Akola	142d 22h 47m	
				* · 1 2 3 4 / *	
			10.m		
	Problem Table		SLA Status		
	Time Problem 1	Severity Device	Device Name	1. SLA 1.	
	27/12/22, Interface I2tp-VPN: Link down	Average Vartak_Nagar	FIS_Bandhan_Sahararhat	_C706 100	
	05/09/22 High ICMP ping response time	Warning UKSCB Ultarkas	FIS_Bandhan_Chandpur_	2810 100	
	12:20	onoco_ocurrus	Ecom_LNW_Lunawada	100	
	12/06/23, High memory utilization (>45%	Warning UKSCB_Uttarkasl	hi Ecom_KDW_Kurduwadi	100	
	29/05/23 High memory utilization (>45%	Warning UKSCB Kotdwar	Ecom_PoC_Router_NE-15	100	
	08:01 for 5s)	onses_notation	Sify_ADBF_Andheri	100	
	10/06/23, Interface I2tp-Client: Link down	Average UKSCB_Kotdwar	SVC_Oshiwara	100	
	17:02		Vartak_Nagar	100	
	18/03/23, Device Unreachable 11:10	UKSCB_Roorkee	Citizen_Madh	100	
	deleting Device University is	The second second second second	ESAF_CZ_State_Office	100	

Geo-Mapping



Inventory Monitoring

ΠΕS

	Customer List	~					
	Inventory						
grade	Device Name î	MAC ID	U IP Address	↑↓ Status	°↓ Model	🗘 🛛 Firmware Version 🛝	SLA 🛝
	FIS_Bandhan_Sahararhat_C706	C8:EE:A6:43:CD:FC	10.50.0.15	Online	NE-05	NE-05v1.2.0	100
ration ~	FIS_Bandhan_Chandpur_C810	C8:EE:A6:43:C9:1A	10.50.0.17	Online	NE-05	NE-05v21.2.1.1	100
ration	Ecom_LNW_Lunawada	C8:EE:A6:43:CE:0C	10.50.0.20	Online	NE-05	NE-05v1.2.5	100
	Ecom_KDW_Kurduwadi	C8:EE:A6:43:CD:F2	10.50.0.19	Online	NE-05	NE-05v1.2.5	100
guration	Ecom_PoC_Router_NE-15	F8:5E:3C:1F:79:CC	10.50.0.28	Offline	NE-05	NE-05v1.2.5	100
	Sify_ADBF_Andheri	C8:EE:A6:43:C6:A4	10.50.0.33	Offline	NE-05	NE-05v1.2.0	100
	SVC_Oshiwara	C8:EE:A6:43:CC:1E	10.50.0.36	Offline	NE-05	NE-05v1.2.0	100
	Vartak_Nagar	C8:EE:A6:43:C6:7C	10.50.0.38	Online	NE-05	NE-05v1.2.0	100
	Citizen_Madh	C8:EE:A6:43:CC:0C	10.50.1.24	Offline	NE-05	NE-05v1.2.0	100
	ESAF_CZ_State_Office	C8:EE:A6:43:CE:38	10.50.0.40	Offline	NE-05	NE-05v1.2.0	100

Device Overview

ESECURE	=				🔅 🕓 NE	-Admin
Dashboard	Home / Site Info					
Monitoring	ST Bank Dapo	di				
Мар		12722				
Firmware Upgrade	Site Info Histogram	Analytics				
Reports	Management ID	10 50 1 70	More Info *	SIM 1	SIM 2	
hudit Logs	Serial No	D0:93:95:30:76:81		Provider : Jio-4G	Provider : 0	
Bulk Configuration	Model	NE-15		Throughput Capacity : 9 T Signal Strength :-83 Signal Onality :-10 S	Throughput Capacity : 0	
	OS Version	NE-15v21.2.1.1			Signal Strength : 0 Signal Quality : 0	
ser Configuration	Status	UP		Signal Power : -95	Signal Power : 0	
Tenant Configuration	Device Uptime	6h 8m 27s		BAND : LTE	BAND: 0	
	WAN IP	172.16.16.114		IMSI : 405864129147453	IMSI: 0	
rchestrator	CPU Utilization	1.62 %				
	Mem Utilization	75.67 %				
	Up Since	1h 33m 34s				
	Config Backup On	null				
	Link Speed					









Case Studies





Leading Private Bank in India (470 locations)



Summary

Customer was looking for centralized visibility, control & security over its network along with redundancy / fallback in last mile connectivity with SLA monitoring.

- Challenges
- Inconsistence connectivity
- No redundancy in WAN Network
- No uptime SLA / reports
- No traffic prioritization
- No centralized visibility / control over the entire network.
- No alert mechanism during incidents
- > Solution
- Multi fabric / media supportable CPE with B/w aggregation/auto failover to avoid any downtime
- SLA Reports
- QoS & Application / Traffic visibility
- Encrypted VPN for end to end communication
- Centralized visibility / control over the entire network





India's leading end-to-end logistics service Provider (890 locations)



Summary

Customer is looking for multiple & multi fabric last mile connectivity on a single CPE in either aggregated or failover mode to ensure zero downtime & uninterrupted SLA driven solution along with centralized visibility & control over its network .

Challenges

- Manageability of Network Infrastructure.
- No flexibility in traditional CPEs in terms of multi fabric support



- Inefficiency of traditional CPEs in terms of random quality checking (brownout) of last mile connectivity
- No or Limited centralized visibility / control over the entire network.
- Reduce of manpower in ground level to avoid human error.
- Solution
- Multi fabric / media supportable CPE with B/w aggregation / auto failover & link wise data usage visibility.
- Automatic monitoring & quality control of last mile connectivity's.
- Centralized visibility / control over the entire network
- Application Aware Routing to optimize the Last mile bandwidth.
- Faster deployment through NeSecure 's ZTP feature without human intervention.





India's leading IT Company looking for WFH Solution for their employees



Summary

During pandemic companies were looking effective WFH Solution for their employees which will provide the seamless and high uptime / network availability

Challenges

- Wanted a cost-effective Solution.
- Challenge from existing BB Service Provider Bandwidth availability and uptime



 Since Company was paying for BB; everyone in family were using the same BB and the required Bandwidth availability was compromised

Solution

- Provided Dual SIM NE25 device which had a back up from LTE where QoS was defined and Office Traffic was prioritize assigning specific bandwidth for office work.
- Complete visibility of employee's online availability was captured by company by HR & Admin
- Visibility of daily work done was readily made available to the respective organization.
- The Solution was cost effective and was made available within the budget.



 In line with the Government of India vision to make the Internet infrastructure ready with IPv6, NE-WAN is ready with the IPv6 Stack.
 Transition Options:

- Dual Stack
- IPv6-IPv4 Tunnel
- IPv6-IPv4 Translation





LET'S GET CONNECTED !!!

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Thank You

