

VIASAT NETAGILITYTM Virtual mobile SD-WAN /SD-LAN networking platform

Stay connected virtually anytime, anywhere using any network

The Viasat NetAgility[™] Virtual Router (NVR) is a flexible, virtual software-defined networking (vSDN) platform that bridges disparate networks and distributed cloud resources to enable robust and resilient connectivity across the battlespace, even in disconnected, intermittent, limited (DIL) environments. The NVR transcends the traditional Primary/Alternate/ Contingency/Emergency (PACE) approach by simultaneously routing or bonding packets over all available communications links, providing a powerful, responsive solution for huband-spoke topologies (Figure 1). The same NetAgility[™] vSDN router platform also enables automated failover mesh networking across disparate edge networks (Figure 2).

The NVR features an intuitive setup and software-based, hardware-agnostic deployment that can run on modern and legacy platforms as well as virtualized and cloud environments. This enables deployment across diverse platforms such as VMware and KVM across standard x86 platforms, bare metal installation on Single Board Computers (SBC) and System on Chip (SoC) ARM-based host systems, and Cloud deployments such as Amazon Web Services (AWS), Microsoft Azure, Google Cloud, Oracle, and others. This enables the NVR to extend from edge to cloud across existing fielded platforms, as well as smaller edge compute platforms, including soldier wearables, low SWaP IoT devices, and our rugged, small-form-factor NetAgility™ Mobile Router (NMR) devices.

Management of devices is conducted through Viasat's NetAgility[™] Orchestrator, which supports remote configuration and monitoring of all NetAgility[™] devices.

Orchestrator



Viasat NetAgility™ At-a-Glance

- Multiple communications paths for transport-agnostic seamless connectivity across SATCOM, wireless, beyond line-of-sight (BLOS), dismounted line-of-sight (DLOS), Mobile Ad-Hoc Network (MANET), line-of-sight (LOS), and tactical radios
- Centralized Orchestrator for unified management
- SD-WAN/SD-LAN operations in both lower and upper tactical network environments for disconnected operations
- Radio, electronic warfare (EW), cyber, and network environmentalaware management and routing; distributed cloud for disconnected ops; artificial intelligence/machine learning (AI/ML) for touchless operations





Figure 1: NetAgility™ automated failover intelligent mesh for situational awareness and comms in distributed environments of mixed LOS networks.

Viasat NetAgility™

VIRTUAL PLATFORM SPECIFICATIONS					TACTICALLY SPECIFIC PROTOCOLS/FEATURES						
Platform	Operating Environment				Radio Aware Routing			GPS/CoT location			
x86	ESXi VMware; KVM				UDP/ESP Packet Management			Mesh VPN			
ARM	Bare Metal				Type-1 Crypto Routing			SATCOM Acceleration			
Cloud	AWS, Azure, Google, OpenStack				MANAGEMENT INTERFACES						
SUPPORTED NETWORKING AND PROTOCOLS					SNMPv3			Northbound APIs for SIEM integration			
TCP/IP	OSPF				Log Management			Alerting			
BGP	DHCP				Status/Health Monitoring			Router Management			
DNS	Commercial VPN Tunnels										
NETAGILITY™ SCALING (NODES, BANDWIDTH, COMPUTE RESOURCE) FOR <i>EDGE ROUTERS</i>											
Transports	1-2	1-2	1-2	3-4		3-4	3-4	5-6	5-6	5-6	
Routing Bandwidth (Mbps)	50	100	250	50		100	250	50	100	250	
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Routing Bandwidth (Mbps)	50	100	250	50	100	250	50	100	250
Min vCPUs	2	2	4	4	4	6	6	6	8
Min RAM (GBs) ¹	4	4	4	4	4	4	8	8	8
Min Storage (GBs)	10	10	10	20	20	20	30	30	30
Viasat PN (1-year)	1416242	1416244	1416246	1416242	1416244	1416246	1416242	1416244	1416246
Viasat PN (3-years)	1416243	1416245	1416247	1416243	1416245	1416247	1416243	1416245	1416247

¹ When using GEO SATCOM, add an addition 4 (GB) RAM to the minimum required RAM for TCP acceleration.

NETAGILITY[™] SCALING FOR AGGREGATORS (HUB ROUTERS)

# of Routers Connected	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15 ²
vCPUs	4	6	8	12	14	16	18	20
RAM (GBs)	8	16	16	16	32	32	32	32
Storage (GBs)	30	30	30	30	30	30	30	30
Viasat PN (1-year)	1416246	1416246	1416246	1416246	1416246	1416246	1416246	1416246
Viasat PN (3-years)	1416247	1416247	1416247	1416247	1416247	1416247	1416247	1416247

² Please contact Viasat if you need an Aggregator to connect to more than 15 routers.

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