

VIASAT NETAGILITY™

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.

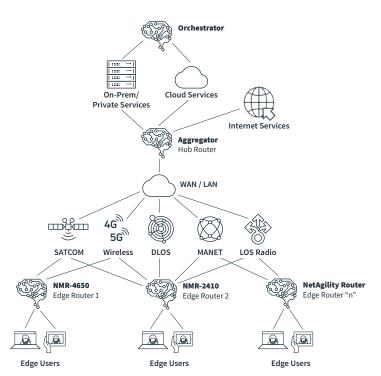


Figure 2: NetAgility™ multi-transport, multi-platform, and multi-cloud resilient bonded networks for optimized data sharing and services access.



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

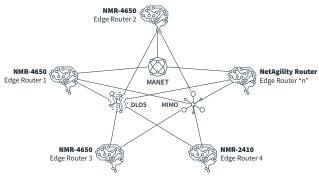


Figure 1: NetAgility™ automated failover intelligent mesh for situational awareness and comms in distributed environments of mixed LOS networks

Viasat NetAgility™

VIRTUAL PLATFORM SPECIFICATIONS

Platform Operating Environment

x86 ESXi VMware; KVM

ARM Bare Metal

Cloud AWS, Azure, Google, OpenStack

SUPPORTED NETWORKING AND PROTOCOLS

TCP/IP OSPF BGP DHCP

DNS Commercial VPN Tunnels

TACTICALLY SPECIFIC PROTOCOLS/FEATURES

Radio Aware Routing GPS/CoT location

UDP/ESP Packet Management Mesh VPN

Type-1 Crypto Routing SATCOM Acceleration

MANAGEMENT INTERFACES

SNMPv3 Northbound APIs for SIEM integration

Log Management Alerting

Status/Health Monitoring Router Management

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	
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		

 $^{^{\}rm 2}$ Please contact Viasat if you need an Aggregator to connect to more than 15 routers.

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