VIASAT NETAGILITY™ NVR-1000

Virtual mobile SD-WAN /SD-LAN networking platform

Stay connected virtually anytime, anywhere using any network

The Viasat NetAgility™ NVR-1000 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-1000 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 hub-and-spoke topologies (Figure 1). The same NetAgility vSDN router platform also enables automated failover mesh networking across disparate edge networks (Figure 2).

The NVR-1000 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-1000 to extend from edge to cloud across existing fielded platforms, as well as smaller edge compute platforms, such as soldier wearables and IoT low SWaP devices.

Management of devices can be conducted locally or through Viasat's NetAgility Orchestration Portal NVO-1000, which supports remote configuration and monitoring of all NetAgility devices.
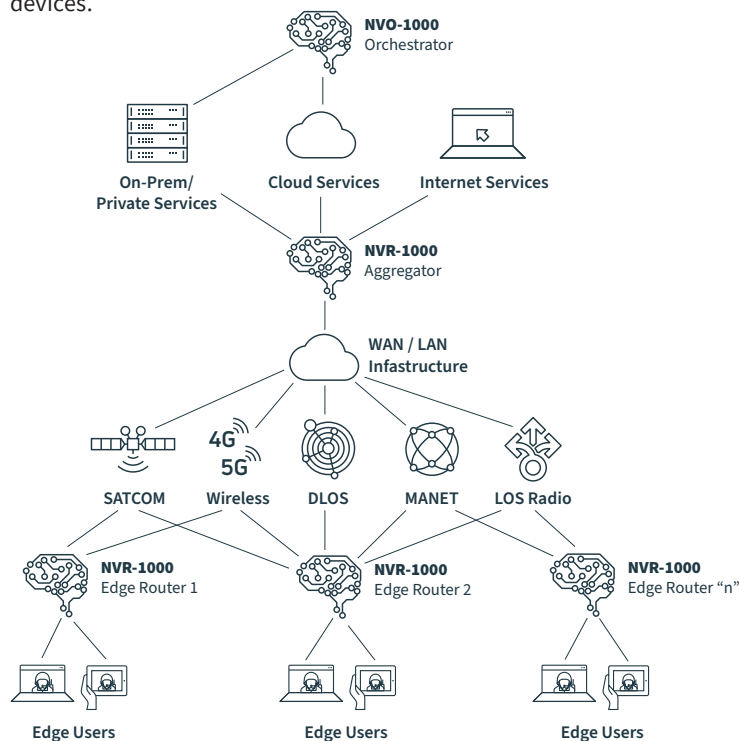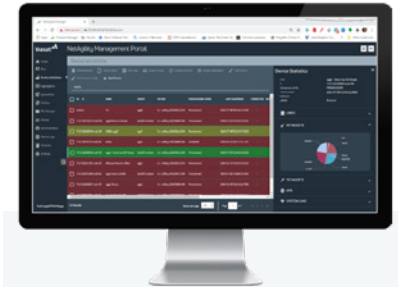
Viasat NetAgility™ NVR-1000 At-a-Glance

› Multiple communications paths for transport-agnostic seamless connectivity across SATCOM, wireless, BLOS, MANET, LOS, and tactical radios

› Centralized Orchestrator for unified management

› SD-WAN/SD-LAN operations in both lower and upper tactical network environments with disconnected operations

› Radio, EW, Cyber, Network environmental-aware management and routing; distributed cloud for disconnected ops; AI/ML for touchless operations

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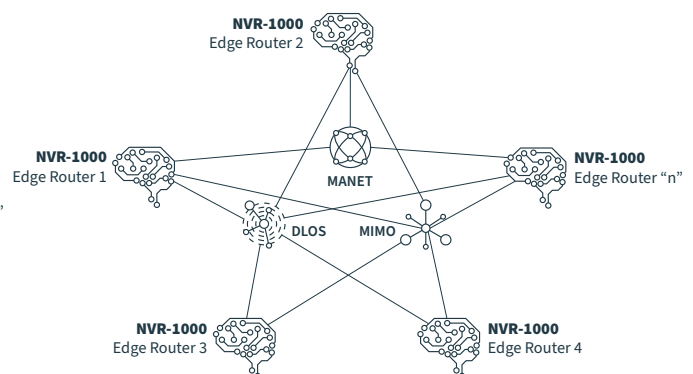

Figure 1: NetAgility automated failover intelligent Mesh for situational awareness and comms in distributed environments of mix LOS networks.

Viasat NetAgility™ NVR-1000

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 *EDGE ROUTERS*

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

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

Viasat