

NovelSat

Making Space in Space



# NovelNet NMS

Smart Satellite Management  
& Content Protection Solution



NovelNet NMS (Network Management System) is an open, scalable, and reliable network management platform specially designed to provide end-to-end life cycle management for satellite-based networks, including P2P, P2MP, and Broadcast networks. NovelNet NMS provides a fast and simple approach to network and service management. The platform allows all satellite network elements to be viewed from a single unified dashboard supporting a wide range of network management functions, including: fault, performance, topology, maps, configuration, monitoring, and dashboard reporting.

The NovelNet NMS solution dynamically optimizes resource usage to maximize network performance and link assurance. The NMS continuously monitors satellite links and automatically reallocates bandwidth and priorities, enabling delivery of the maximum throughput at minimal cost.

Quick to implement and simple to use, the NovelNet NMS is available as Cloud SaaS, virtualized, or on-premises – to fit any network size.

# Benefits

Unified management umbrella

Lower operation and maintenance costs

Complete life cycle management

Maximized network performance

Secured video & data services (AES 256)

Dynamic bandwidth allocation

Improved time-to-resolution of problems

In-Band, Out-of-Band and OTA management



## Related products

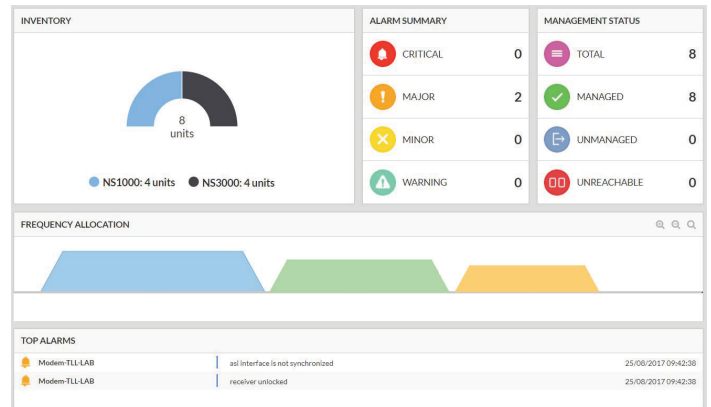
NS3000 Professional High-Data Rate Satellite Modem (up to 850Mbps),  
NS300X IP Satellite Modem (up to 30Mbps), NS1000 Satellite Modulator,  
NS2000 Satellite Demodulator.

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# The solution supports the following features

## Dashboard

The Dashboard provides a unified view in a single, easy-to-use portal that highlights essential data. Available at the Network, Site, and Equipment levels, the Dashboard provides key summaries about aspects of operation such as inventory, alarms, frequency allocation, and other important indicators. The Dashboard's dynamic reporting reduces the time required to respond to any system issues by offering a quick and intuitive – yet comprehensive – understanding of operation.



## Web-based User Interface

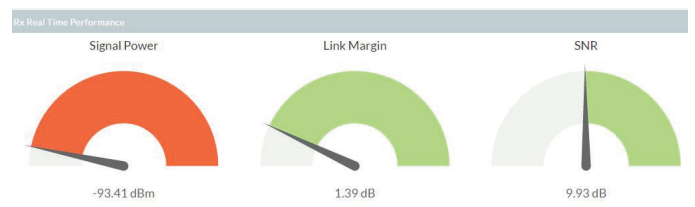
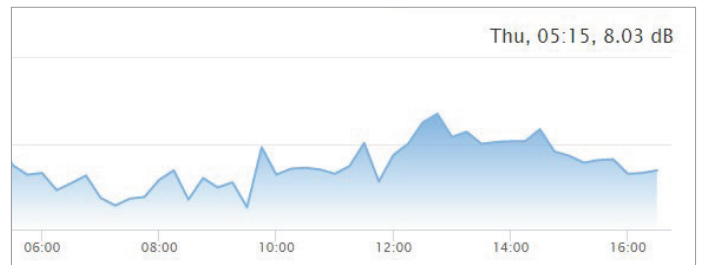
The NMS has an intuitive, Web-based user interface (UI) that enables easy navigation and drill-down, from network view to equipment and service view. Built on HTML5 technology, the NMS Web-based UI is available from all common browsers, including Chrome, Firefox, and Edge.

## Bandwidth on Demand (BoD)

In SCPC point-to-multiple-point deployment, each terminal has its own dedicated return link. The NMS smart return link technology enables to serve more terminals with less bandwidth. The NMS's BoD module dynamically reallocates network resources in real-time for maximum efficiency and bandwidth saving.

## Performance Monitoring

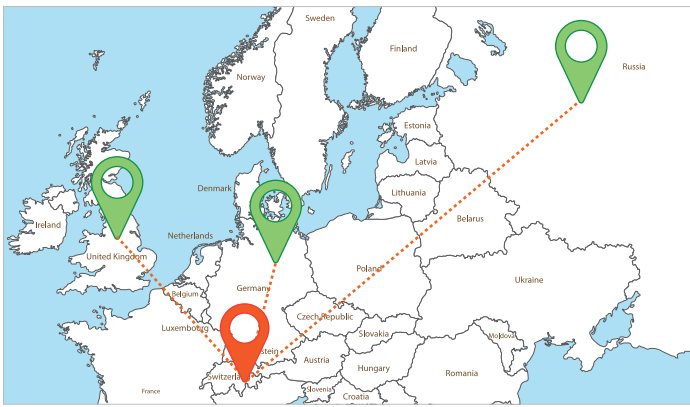
By providing information about real-time and historical performance, the NMS solution gives you a comprehensive understanding of network status at the equipment and network levels. The system's real-time updates offer information about the current health of the network by presenting actual status and performance values, and the historical data allows you to analyze trends, identify network bottlenecks, optimize the network, and reach maximum capacity and utilization using available resources. In addition, the NMS' performance monitoring capabilities allow you to provide monthly SLA reports of satellite link performance.



Severity	Equipment	Type	Source	Alarm	Description	Received Time	Status
Major	Device_172.31.27.107	NS3000	line	loss	receiver unlocked	04/09/2017 15:30:01	OPEN
Major	Device_172.31.27.103	NS3000	line	loss	receiver unlocked	04/09/2017 15:25:01	CLOSED
Major	SKYNET_HUB_MODEM	NS3000	line	loss	receiver unlocked	04/09/2017 05:43:15	OPEN
Major	SYSTEM	SYSTEM	LICENSE.1	License Expiration	Demo License will expire in 2 day(s)	03/09/2017 22:21:53	OPEN
Critical	SYSTEM	SYSTEM	81.218.52.218	Equipment Unreachable	Modem - Equipment Unreachable	03/09/2017 08:58:47	OPEN
Critical	SYSTEM	SYSTEM	103.52.229.227	Equipment Unreachable	SKYNET_Remote_Modem - Equipment Unreachable	29/08/2017 16:59:32	OPEN
Major	Device_172.31.27.107	NS3000	sensor	Temperature too high	Temperature reported by the sensor is too high	17/08/2017 21:22:08	OPEN
Critical	Device_172.31.27.107	NS3000	sensor	Battery	Battery level is critical	17/08/2017 21:22:08	OPEN

## Fault Management

Fault Management offers a centralized list of active and historical alarms – supporting quick troubleshooting, and facilitating an effective understanding and rapid exposure of any network issues. The platform supports filtering and provides correlation capabilities that make it significantly easier to identify the root cause of a problem.



## Topology and Map

The topology tree and map present a hierarchical level of sites and equipment, and allow you to obtain a clear picture – using Google maps – of the entire network, or of a specific region. The topology tree and map illustrate the location of each unit, the relationship between the units, and the unit and link status.

## Configuration

With the NMS platform, you can configure settings online, defining configuration parameters at the device level – or you can build a configuration file template and apply it on the device level, enabling quick and uniform device configuration. The system's integrated and robust online and offline capabilities combine to create a powerful configuration tool.

The screenshot displays the NMS configuration interface with several panels:

- GENERAL**: Includes 'Hyper Mux' (SOURCE) and 'Takers' (5).
- Satellite**: Includes 'AS5 C11V' (14).
- DRM OPERATIONS**: Shows an 'ACTIVE' status.
- AES OPERATIONS**: A table with columns for ID, AES Key, Created, and Status.
 

ID	AES Key	Created	Status
0	...ECA2	18/08/2017 07:56:19	Active
1	...D448	18/08/2017 07:56:18	Inactive
- TAKER LIST PER HM**: A table with columns for Taker Name, City Name, and Continent.
 

Taker Name	City Name	Continent
AEDBSC	DBAI	AS
ALTOPC	TRNA	EU
AMASTC	JRVN	EU
AMPTV	JRVN	EU
ARESPH	BNRS	AM

## Campaign Management

Campaign Management allows you to conduct batch configuration and maintenance tasks across the entire network or on selected devices. Campaign tasks, such as FW upgrade, can be run manually or scheduled automatically, and indicators are provided for of task progress and task completion. The Campaign Manager saves time and significantly cuts management costs.

## NovelSat ProtCASTER

Offering the highest level of satellite security and protection, the ProtCASTER is designed to meet the needs of professional contribution broadcasters who are concerned about content rights and want to make sure that content is blocked from unauthorized sources – while utilizing even less bandwidth. In addition to content security based on AES 256-bit encryption, the ProtCASTER offers content protection that comes from knowing that a receiver's viewing rights are based on entitlement information defined per video channel.

## Northbound Interface (NBI)

For smooth and quick integration with higher-level management systems, such as CRM and OSS systems, the NMS provides the REST API Northbound Interface (NBI).

## Scheduler

Scheduler: The Scheduler allows you to pre-schedule broadcast events and book the necessary resources and permissions, to facilitate smooth and secured streaming of content.

