Product Brochure

Elastix-TotalNMS

Pioneering Network Management for Ground-Space Harmony

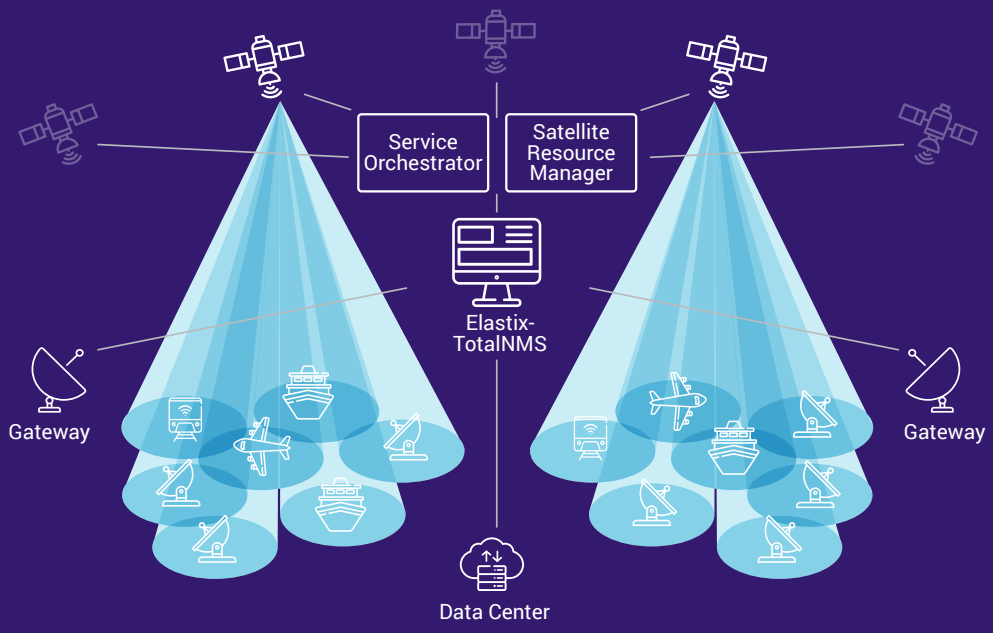
New next generation Very High Throughput Satellites (VHTS) and Non-Geostationary Satellite Orbit (NGSO) constellations bring massive bandwidth, scale and service flexibility, leading to more powerful and capable satellite networks than ever before. These networks provide unparalleled agility and enable demand-based bandwidth delivery where and when it is needed.

However, as networks expand globally, in bandwidth, number of subscribers and with the introduction of new satellite constellations and software-defined satellites, efficient network management becomes more and more challenging. For that, Gilat developed the industry's most advanced network management system for multi orbit ground systems – the Elastix-TotalNMS.

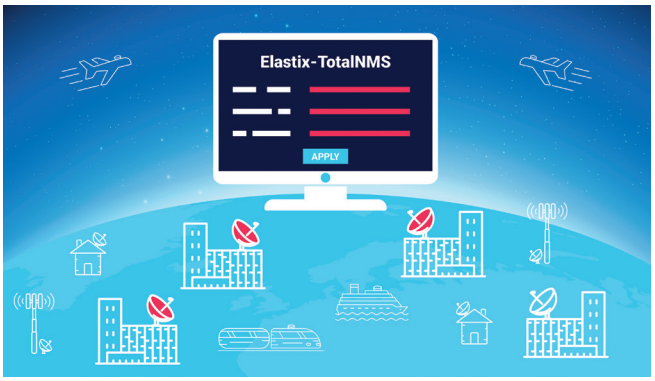
Elastix-TotalNMS is a microservice based cloud-native application featuring standard interfaces to next generation satellite resource managers and service orchestrators. With this state-of-art architecture, Elastix-TotalNMS is best equipped to support high availability, scalability, elasticity and automation in multi-orbit networks deployed with both SkyEdge-IV and SkyEdge II-c platforms.

Benefits

- Smart management of multi-orbit networks and software-defined satellites
- Integrates with Satellite Resource Managers (SRM) and service orchestrators, utilizing standard REST interface and Kafka Big Data Streams
- High scalability and availability with a cloud-native microservices-based Kubernetes architecture
- Concurrent operation with SkyEdge IV and SkyEdge II-c deployments
- Seamless and quick multi-orbit, beam and satellite handover
- Rich service portfolio accommodates all MNO, Telco and ISP needs and Elastix-SCPC (eSCPC)



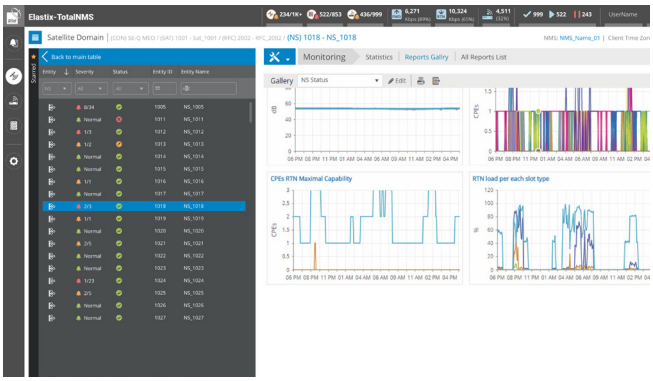
Agile network configuration



With Elastix-TotalNMS' service-oriented approach, the network is configured by entering the satellite service characteristics rather than configuring each sub-system individually. This process dramatically simplifies network setup and modification.

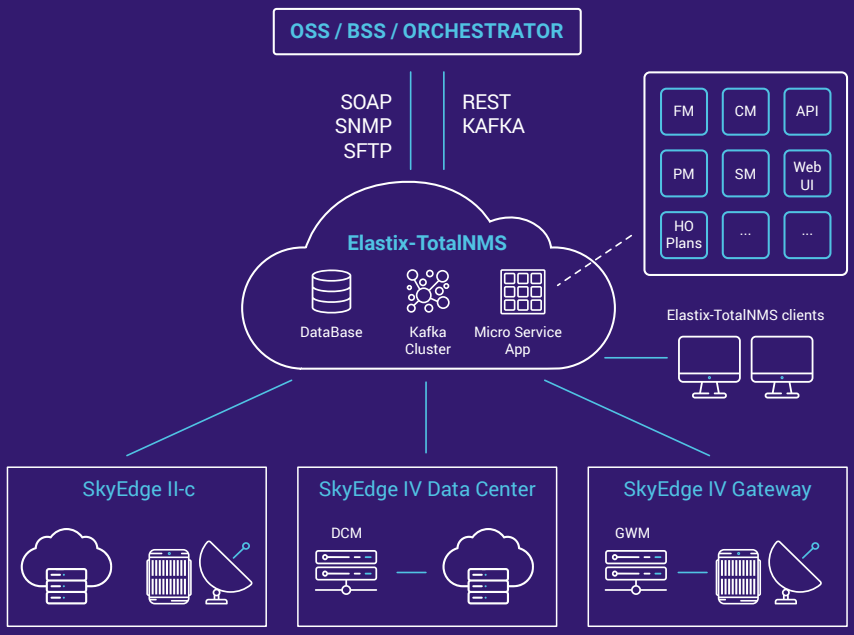
Elastix-TotalNMS simplifies service provisioning by using configurable profiles for various services including Broadband Internet, Enterprise, Mobility and Backhauling services. With these profiles, each service is configured once and then assigned to all customer equipment sharing the same service characteristics. This approach helps operators quickly respond to their customer's service demands.

Big Data and Analytics-Based Service Assurance

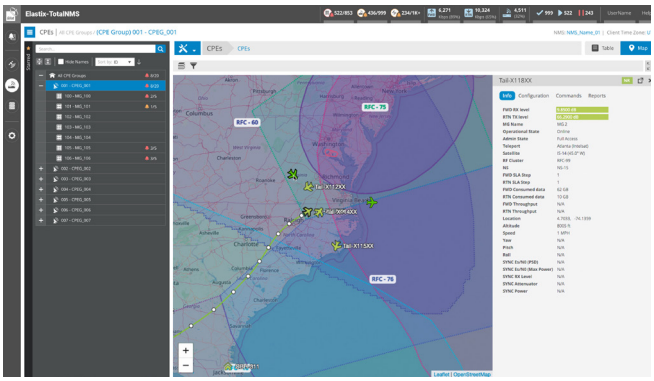


Utilizing Kafka streaming bus, the system receives in real-time all network events and massive amounts of performance data. This information is analyzed, stored and intuitively displayed providing accurate network status at all times.

Our dashboard and pinpointed alarm descriptions ensure that any network issue is immediately detected and quickly resolved. Moreover, our extensive real-time and historical reports provide clear and deep visibility into network utilization statistics and service KPIs. Using this detailed information, operators can optimize resource allocation to best fit usage trends and keep customers satisfied with an entire range of services.



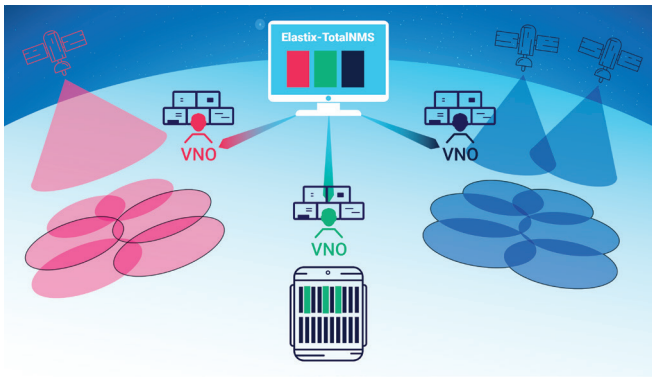
Advanced cross constellation mobility service management



With Elastix-TotalNMS maps, the terminal route, together with its real time service KPIs are always displayed on the map. In addition, the geographically based behavior of mobility services such as the VNO service boundaries (i.e. the areas where the service is allowed and the right place to switch between overlapping beams) are overlayed onto the map.

This provides operators the ability to track their mobility fleet's status throughout the changing conditions of beams, satellites, constellations and even platform generations (SEIV and SEII-c) along their route. This advanced capability enables operators to ensure service quality at all times.

Flexible Wholesale Business Models



Elastix-TotalNMS provides a carrier-grade wholesale service portfolio that flexibly accommodates various VNO needs.

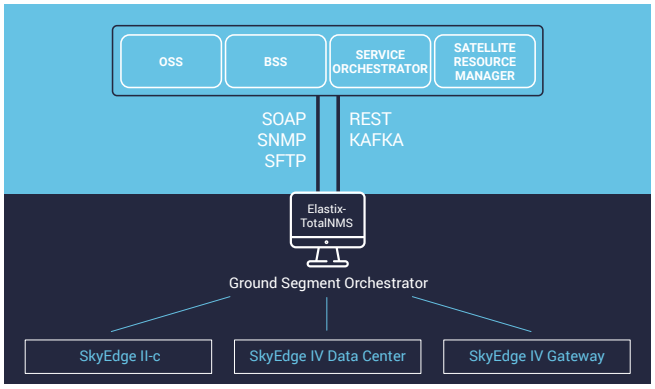
Some VNOs may want their wholesale bandwidth specifically defined per beam, while others may prefer one global bandwidth pool flexibly utilized over multiple satellites and beams. And some may even wish to run and manage their own dedicated hub hardware. With Elastix-TotalNMS, operators can easily create and monitor all these services, letting their VNOs manage their network as they see fit.

Facilitated Service Orchestration and Automation

Elastix-TotalNMS is equipped with standard interfaces to next generation satellite resource managers and service orchestrators. The system features Kafka bus for real-time events and performance data. This high capacity streaming mechanism provides external orchestrators and OSS systems with massive information on usage and overall network status in real-time. This constant flow of updated information is the fundamental requirement of demand-based service and dynamic beam configurations performed by next generation satellite orchestrators as well as automated external service assurance processes.

In addition, the system is equipped with REST API for network configuration, resource allocation and service provisioning.

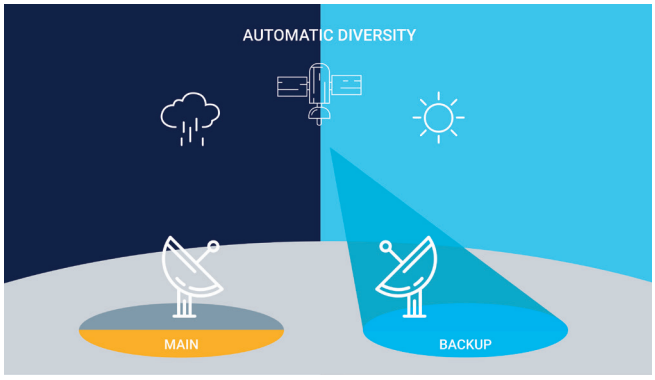
With this solution in hand, network operators are now ready to face the higher levels of flexibility and agility required to accommodate new advanced services and applications in next generation constellations and software-defined networks.



Always-On Service Availability

In addition to Gilat's built-in platform redundancy, the multi-site distributed architecture supports the optional deployment of a secondary diverse gateway, datacenter or NOC to achieve higher levels of availability and network resiliency in cases of extreme weather conditions or natural disasters.

Elastix-TotalNMS ensures fast and reliable switchover to geographically diverse locations, with minimal downtime. With this capability, operators can assure high network availability at all times.



SUMMARY

Elastix-TotalNMS gives network operators all the tools, information and APIs needed for end-to-end automation, simplified operations, reduced costs and an improved customer experience.

Simplify Operations

Reduce Costs

Improve Customer Experience

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