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Revolutionizing Satellite Communication: Migrating to the Cloud

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In today's interconnected world, reliable and high-speed communication is vital for businesses, governments, and organizations to function efficiently. Very Small Aperture Terminal (VSAT) platforms have been a longstanding solution for satellite communication, enabling data transfer and connectivity in remote and challenging locations. However, the traditional on-premises deployment of VSAT platforms comes with inherent limitations and costs. To overcome these challenges, many are now considering moving their satellite communication platforms to the Cloud. Here at Gilat, we have examined the reasons behind this transition, the key aspects to consider, and how we are enabling our customers to make the migration to the cloud seamless and effective.

Network Operators Benefit From Migrating Their Satellite Communications to the Cloud

Transitioning to the cloud enables operators to decouple software from hardware, whether they opt for a public or private cloud setting. This separation process brings forth a host of advantages, including:

Cost-Effectiveness and Flexibility

Migrating to the cloud offers a cost-effective alternative to capital-intensive on-premises deployment. Cloud services follow a pay-as-you-go model, allowing organizations to modulate resources based on demand, which eliminates the need for substantial upfront investments.

Scalability and Rapid Deployment

As businesses grow and expand their operations, their communication needs evolve accordingly. Cloud-based SATCOM solutions offer unparalleled scalability, allowing organizations to seamlessly increase or decrease satellite capacity based on fluctuating requirements. Moreover, with cloud-based deployment, the time required for system deployment and configuration is significantly reduced, enabling rapid deployment to new locations and projects.

Simplified Management and Monitoring

Managing and monitoring on-premises VSAT platforms can be a complex and resource-intensive task. In contrast, cloud-based VSAT solutions streamline system administration, enabling centralized management and monitoring through user-friendly dashboards.

Bottom line: Moving to the cloud allows operators to focus on their service capabilities rather than on running their networks.

SkyEdge IV is Architected for the Cloud

SkyEdge IV, Gilat's next-generation multi-service platform, was designed specifically to take advantage of cloud capabilities:

- 1) The Elastix-Architecture was designed to harness the full potential of Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) cloud models, making it an ideal solution for optimizing throughput in cloud environments. SkyEdge IV's software-defined orchestration enables leveraging next-generation satellites for maximum performance.
- 2) The Elastix-TotalNMS is seamlessly integrated with cloud service orchestrators, enhancing the platform's compatibility with cloud environments. The standard interfaces enable smooth communication between SkyEdge IV and various cloud management tools, such as Kubernetes. This integration simplifies the deployment and management of SkyEdge IV on cloud infrastructures. Consequently, this streamlined orchestration facilitates the efficient utilization of cloud resources, leading to enhanced operational performance and cost-effectiveness.
- 3) SkyEdge IV was specifically designed as a virtual platform, leveraging the benefits of virtualization to achieve optimal scalability. The platform can effortlessly scale its resources, including processing power and memory, to handle increased workloads without the need for significant hardware upgrades. In cloud environments, where scalability is a critical aspect, SkyEdge IV's Elastix-Architecture allows operators to dynamically allocate resources as required, ensuring that the system can effectively handle peaks in demand without any performance bottlenecks. This flexibility results in an agile and responsive system that efficiently utilizes cloud resources, minimizing wastage and optimizing performance.
- 4) By being hosted on the cloud, SkyEdge IV will have access to a pool of elastic resources that can be dynamically adjusted to match the actual demand. Traditional on-premises systems often require over-provisioning of resources to handle peak loads, leading to underutilization during idle periods. In contrast, SkyEdge IV's cloud-native approach enables it to scale resources up or down based on real-time demand. As a result, operators can ensure that cloud resources are optimally utilized, thereby enhancing operational efficiency and cost-effectiveness.
- 5) SkyEdge IV will be managed as a cloud resource, bringing several operational cost efficiencies. Cloud environments provide resource management features that enable automated provisioning and de-provisioning of virtual machines, reducing the need for manual intervention. This automated management streamlines administrative tasks and eliminates the need for dedicated hardware maintenance, leading to cost savings in terms of human resources and infrastructure upkeep. Moreover, the pay-as-you-go model of cloud services ensures that organizations only pay for the resources they consume, enabling cost optimization by aligning expenses with actual usage.

Your Partner in the Cloud

The migration of VSAT platforms to the cloud is an essential step for network operators seeking cost-effectiveness, flexibility, and enhanced performance in their communication infrastructure. By leveraging Gilat's expertise, they can deliver seamless data migration, scalability and high availability, empowering them to stay ahead in an interconnected world. The Elastix Architecture of SkyEdge IV's platform supports a phased approach migration, to best meet the business needs. Each of the components - the Data Center, the Gateway and the NMS - can be independently migrated when the time is right to reduce the customer's risks and allow decisions based on economic viability.

Partnering with Gilat, network operators can embrace the power of the cloud and unlock the full potential of their VSAT communication networks.

For more information please visit: [Cloud](#) or contact us at: info@gilat.com