

Evolving connectivity

by Rob Preston, *Senior Technical Engineer, GTMaritime*

Continuing advances in satellite connectivity at sea – especially the rise of low-Earth orbit (LEO) networks – mean that ships in service have access to higher bandwidths than ever before. For the first time, companies can truly replicate their shoreside IT set-up on board vessels at sea, implementing the same office software tools they use on land to benefit from more consistent processes and streamlined IT management. This growing number of connectivity options available to the shipping industry emphasises the need for flexible and secure email and data-transfer solutions designed specifically for maritime use.

Yet, although the enhancement of interconnectivity between vessels and shore-based operation centres is a positive development for the maritime industry, it also entails new risks to cyber security. By unifying their onboard and onshore software, shipping companies expose their vessels to the same cyber threats to which their land-based offices are subject. With digital solutions evolving rapidly and the volume of data being transferred from ship to shore soaring, the risk of a cyber-attack is also on the rise.

Another vital consideration for shipowners looking to mirror their office IT set-up on board their vessels is that the products used onshore are rarely designed with maritime deployment in mind. Where shore-based infrastructure may comfortably support their high

bandwidth demands, vessel infrastructure may be pushed to its limits. Even with the increasing bandwidth available to owners, using conventional office software tools aboard a ship can impact other crucial data-dependent functions, such as crew connectivity – a significant consideration in modern shipping.

Secure & lean

Against this background, shipowners require software tools optimised for use at sea, with built-in security features and the capacity to minimise data consumption for routine business tasks, including email and file sharing. These tools should be compatible with the many network types available to shipping today; ideally, they should also be provided by technology companies familiar with the challenges faced by shipping, both in terms of working practices

and the evolving threats specific to ship communications.

GTMaritime has supported ship-shore connectivity for maritime businesses since 1998, and today, its solutions can be found on board over 14,500+ ships worldwide. In developing and upgrading its products, our team works closely with its international customers to ensure their requirements and challenges are being addressed. For example, GTMailPlus is a maritime-optimised email service whose success has been built around its ability to facilitate integration with popular office software suites, such as Exchange, Office365, and Gmail. This allows ship- and shoreside personnel to use familiar tools while benefiting from stable, secure, and bandwidth-efficient data transfers.

Meanwhile, our file and data replication service, GTReplicate, uses its proprietary secure data transfer protocol to optimise data



Photo: Canva

streams between ship and shore, identifying changes in files to minimise the amount of data being transferred. As a result, even while large, data-heavy transfers are in progress, sufficient bandwidth remains available to support other tasks – with the crew still able to access online communication and entertainment services, for instance.

Better together

GTMailPlus also features an enterprise-grade security suite as standard to address the increasingly pressing issue of vessel cyber security, offering robust protection from threats, including zero-day attacks. This comprises anti-phishing, antivirus, spam management, and advanced threat protection applications. In the past six months alone, GTMaritime's solutions have protected ships against over 100k malware attacks unknown to standard antivirus services and blocked over 14m spam messages.

Reflecting GTMaritime's holistic approach to vessel security, the company offers a range of end-point protection solutions for vessels to provide scalable, intelligent, and strong protection without impacting productivity. To further enhance the company's cyber security offering, GTMaritime recently became a Focus Partner in the CrowdStrike Powered Service Provider programme, which means GTMaritime solutions can now be integrated with the CrowdStrike Falcon platform.

Provided in partnership with CrowdStrike, customers receive an end-point detection and response solution with artificial intelligence-based next-generation antivirus. This includes the ability to isolate single devices to protect the rest of the network and offers different levels of firewall protection, security operations centre, and threat hunting, along with access to 24/7 support in the event of an incident.

Together, GTMaritime's powerful solutions and the CrowdStrike Falcon platform provide protection from both known & unknown malware and ensure regulatory compliance as set out in the new Unified Requirements for cyber security from the International Association of Classification Societies (mandatory for classed ships and offshore installations built on or after 1 January 2024).

Maritime-optimised

Crucially in today's maritime industry, in which companies increasingly rely on more than one network to meet their operational needs, our solutions are compatible

with any network type – whether based on LEO, geostationary, Wi-Fi, or LTE connectivity. They, therefore, provide secure and efficient data transfer regardless of the service – or combination of services – a shipowner uses.

Equally important is reliability. In the last year, GTMaritime software has achieved 99.98% network uptime. Backed by two European Union-based data centres and market-leading cloud-based infrastructure, it also offers high levels of redundancy and scalability.

As maritime connectivity evolves, increasing care must also be taken to ensure that vessels are not exposed to avoidable cyber threats and that crucial onboard processes are not hindered by data-hungry software designed for shore-based offices. Owners and operators would benefit from ensuring that their chosen solutions are flexible and maritime-optimised, support secure and efficient data transfers irrespective of network type, and account for the unique challenges facing ships and personnel at sea. ■



GTMaritime is a leading provider of secure maritime data communications solutions. Since 1998, the company has been providing a range of technology solutions and services to the maritime industry that enable effective communications over satellite. GTMaritime specialises in solutions and services that help ensure vessel compliance and business operability 365 days a year, as well as keeping crew in touch with friends and family whilst at sea. Connect to www.gtmaritime.com to find out more.