

Case Study

Dispersive Technologies Selects SafeLogic's CryptoComply and RapidCert to Add FIPS 140-2 Encryption to Leading Network Security Products



SafeLogic



The Background

Dispersive Technologies, formerly Dispersive Solutions Inc. or DSI, is a leading innovator in communications security, committed to raising network protection to an unprecedented level. Dispersive's revolutionary technology is currently being implemented by the U.S. Department of Defense, as well as other government agencies at the local, state, and federal levels.

Secure, reliable, and low-latency communications can be difficult and expensive to provide using standard tools and systems. In traditional networking architecture, each client is dependent on a centralized server to route and process all traffic on the network. This dependency produces a situation where the servers—and the data they carry—are vulnerable to “Man-in-the-Middle” hacking attacks, and creates a performance and bandwidth bottleneck.

Dispersive Technologies set out to challenge that traditional model. The single centralized server paradigm has been replaced by Dispersive Technologies' V2V™ (virtual machine to virtual machine) technology. Rather than sending data packets along a single route via a central server, the data is broken into packets and sent through multiple constantly randomized pathways via the various servers, PCs, tablets, and smartphones that comprise the Dispersive Technologies Spread Spectrum IP™ network.

Dispersive's strategy effectively decentralizes the data transmission, making it virtually impossible to hack into any single channel and intercept the data. The system inherently features redundancy and load balancing, and alleviates bandwidth bottlenecks at the servers. The result is a 2x - 5x increase of network speed, a reduction in network traffic by up to 50%, and a significant improvement on traditional network security. In fact, the multi-stream strategy is so hack-proof, Dispersive Technologies' original product didn't leverage traditional encryption at all!

The Challenge

Ironically, the strength of Dispersive Technologies' proprietary networking system also presented a problem. The V2V™ networking architecture was a robust, unique product, immediately embraced by private organizations and receiving significant attention from government agencies. However, Dispersive began to experience resistance from procurement officers because the networking system did not incorporate encryption – traditionally a foundational element of every competitive product in the space. Despite Dispersive Technologies' reservations, it was clear that encryption would be required to grow market share.

“Our concern was that encryption would sacrifice the gains in efficiency that we had benchmarked,” said Dr. Kevin Eveker, CTO and Founder of Dispersive Technologies. “Although we proved that data was not at risk while in transit via our distributed technology, customer feedback led us to seek a crypto solution that would complement our architecture.”

To complicate this search further, Eveker knew that by adding encryption to Dispersive's product offering, it would require FIPS 140-2 validation to satisfy government procurement, a long and grueling process.

Dispersive Technologies Achieves FIPS 140-2

Dispersive Technologies required FIPS 140-2 compliance as quickly as possible, in order to resume sales activities with federal agencies. SafeLogic's streamlined integration and technical support allowed the Dispersive team to complete the “Drop-In” installation quickly and return to their core tasks.

CryptoComply Fits DSI's Unique Architecture

SafeLogic's CryptoComply module contains a variety of NIST-validated algorithms, allowing DSI to dynamically assign each pathway to be encrypted with an entirely different algorithm. This flexible, multi-stream, multi-algorithm system makes the Dispersive Technologies network incredibly secure, and provides an added level of security over traditional single-algorithm, single-stream data networks. The assortment of CryptoComply's encryption schemes meshed perfectly with Dispersive Technologies' strategy; depending on preferences, customers can configure various pathways and mix-and-match with any number of encryption algorithms.

Easy Path to Validation

Dispersive Technologies fully leveraged CryptoComply by adding the RapidCert option, to receive a FIPS 140-2 validation certificate in their own name quickly and with no interaction with the testing laboratory, saving significant time and money from the traditional process.

The Solution

In order to streamline the integration and validation of encryption, Dispersive Technologies turned to SafeLogic. SafeLogic answered with CryptoComply, a standards-based cryptographic library available for servers, appliances, and mobile devices that provides instant “Drop-in Compliance.” Implementation of CryptoComply required only a fraction of the time and cost usually associated with traditional approaches to encryption and offered significant strategic advantages.

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Once CryptoComply was integrated, Dispersive was able to immediately resume sales activity, touting their new encryption features and referencing SafeLogic’s FIPS 140-2 certificates to prove their FIPS compliance. Meanwhile, the addition of SafeLogic’s RapidCert option allowed Dispersive Technologies to earn their own FIPS validation certificates with zero additional effort. By leveraging CryptoComply and RapidCert together, Dispersive avoided the drain on their engineering team while SafeLogic handled all aspects of the process: documentation, lab testing, and coordination, which typically takes up to eighteen months to complete.

“Instead of encountering the technological and validation issues we had feared with encryption, SafeLogic actually helped us add significant security features, increase our performance gains, and grow our competitive edge,” Dr. Evekter said. “Not only that, but our cost and time savings were massive during the FIPS 140-2 process. The SafeLogic team turned a potential disaster into an absolute success.”

With dynamic encryption adding to their security architecture and FIPS 140-2 certificates to reinforce it, DSI should continue to lead the revolution in network security for years to come.



Dr. Kevin Evekter
Founder and CTO
Dispersive Technologies

“Our cost and time savings were massive during the FIPS 140-2 process!”



About Dispersive Technologies

Dispersive Technologies is a systems company that delivers Virtual Dispersive Networking (VDN) technology to the government market. VDN is a patented peer-to-peer virtual networking technology that: significantly enhances secure network communications; secures wired and wireless devices and networks including Mobile Devices, PCs, Servers, and other Internet Protocol (IP) Based Systems; and is a software-based solution that costs significantly less than hardware-based solutions to deploy, maintain, and upgrade.



About SafeLogic

SafeLogic Inc. was established in 2012 to reduce the time and complexity of integrating and validating world class encryption. Spun out from Apex Assurance Group, which has provided FIPS 140 consulting services to top companies for nearly a decade, SafeLogic delivers innovative security, encryption, and FIPS validation to applications for mobile, wearable, server, appliance, and constrained device environments.

SafeLogic is privately held and is headquartered in Palo Alto, CA.



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