Case Study
BlackRidge Technology & SafeLogic Established Partnership to Complete Accelerated FIPS 140-2 Validation

The Background

BlackRidge Technology develops, markets and supports a family of products that provide a next generation cyber security solution for protecting enterprise networks and Cloud services. With their patented technology, network and server resources located in the enterprise, data centers and Cloud systems are better protected and less vulnerable to compromise from cyber-attacks. Their identity-based approach to cyber defense offers superior performance compared to legacy network security approaches, reduces cyber risk and meets network security compliance goals, and reduces the total cost of ownership for organizations by eliminating malicious and unwanted traffic from their networks and systems. BlackRidge's worldwide presence is led from their headquarters in Nevada.

The Challenge

The BlackRidge team faced a confluence of hurdles. They were on the road to the DoDIN Approved Product List (DoDIN APL, formerly UC APL) to better serve their largest customer base, the U.S. government, but FIPS 140-2 validation still remained on their prerequisite checklist. They previously used RSA's BSAFE cryptographic modules, but had already established that a transition would be necessary due to the security concerns and looming end of support. BlackRidge's technical team first explored one option, a proprietary module that would require some re-architecture. The licensing costs were modest on a per node basis, but had potential to escalate quickly with the quantities that BlackRidge planned to sell. Further complicating the situation, the vendor required purchase minimums from the start, so the ramp-up period would have skewed overhead costs.

Next, BlackRidge evaluated OpenSSL as an open source alternative, but discovered that the DoDIN APL would not accept a reference to OpenSSL's FIPS 140-2 certificate. "Piggybacking" was not an option - BlackRidge needed their own validation.

While the BlackRidge team did consider hiring consultants or internal experts, absorbing additional upfront costs and delays in order to achieve FIPS 140-2 validation, they recognized that it wasn't worth it to learn the ropes. They couldn't justify having dedicated personnel for the project, and with a product release approaching quickly and being strapped for time, speed and efficiency became the top priorities.

BlackRidge's DoDIN APL Effort Required FIPS 140-2 Validation

Faced with strict requirements to satisfy procurement officers, BlackRidge Technology needed to complete FIPS 140-2 validation quickly as a prerequisite for DoDIN APL (formerly known as the UC APL). The U.S. government, particularly the DoD, is BlackRidge's primary focus, so compliance certification directly affects their ability to produce revenue.

RapidCert Kept Tight Schedule Intact

BlackRidge explored several avenues to meet the FIPS 140-2 mandate, but only SafeLogic's tandem solution met their needs. CryptoComply served as a replacement for the discontinued RSA BSAFE encryption module, while RapidCert accelerated the FIPS 140-2 validation process. Mix-and-match combinations of other cryptographic modules, proprietary and open source, with consulting services for the validation, were more expensive, more work, significantly slower, and with unreliable projected delivery dates. It was a natural fit to partner with SafeLogic. The FIPS 140-2 validation was completed in weeks and the product was released on time!

The Solution

SafeLogic's CryptoComply flagship module was an easy architectural fit, since the BlackRidge team had already removed BSAFE and switched to OpenSSL. Retaining full compatibility with the OpenSSL stack, CryptoComply was a quick drop-in replacement.

RapidCert was the real attraction, however. "We recognized immediately that this was our quickest path to victory," said Bob Filer, Director of Product Management at BlackRidge. "We had a very short time window until our product release and we needed to keep the ball moving for DoDIN APL. SafeLogic was very responsive and delivered our FIPS 140-2 validation in weeks and we released our product on time."

The validation allows BlackRidge products that include the validated cryptographic module to be deployed by federal agencies, government service providers and other organizations that require products to be certified to meet security standards for protecting sensitive information. Further, it allowed BlackRidge to meet all prerequisites for DoDIN APL and remain on target to complete the process on schedule.

"Along with the rigorous testing completed by the Defense Information Systems Agency (DISA), the completion of FIPS 140-2 validation demonstrates our commitment to meeting the stringent security requirements of the U.S. Government," said John Hayes, co-founder and CTO of BlackRidge Technology. "BlackRidge products are now eligible to be procured by U.S. federal agencies, including the Department of Defense, as well as for use in regulated industries such as utilities, finance, and healthcare."

Providing additional value for BlackRidge, SafeLogic's support team was asked to build an 'Always On' feature, automatically enabling FIPS mode wherever deployed.

"It made it a lot easier for us to integrate," said Filer. "FIPS mode, all the time, across the board, without needing to add logic to toggle. SafeLogic was able to configure that for us, and that saved us a lot of effort."

The partnership between BlackRidge Technology and SafeLogic resulted in the FIPS 140-2 validation certificate #3151, published by NIST on March 14, 2018, followed by successful addition to the DoDIN Approved Products List in June 2018.

> "SafeLogic enabled us to meet all of our FIPS 140-2 goals, even when our timeline appeared to be impossible!"

John Hayes
CTO and Founder
BlackRidge Technology

About BlackRidge Technology

BlackRidge Technology provides an adaptive cyber defense solution that enables its customers and partners to deliver more secure and resilient business services in today's rapidly evolving technology and cyber threat environments. The BlackRidge Adaptive Trust solution provides end-to-end security that proactively isolates cloud services, protects servers and segments networks. Its patented First Packet Authentication™ technology authenticates user and device identity and enforces security policy on the first packet of network sessions. This new level of real-time protection blocks or redirects unidentified and unauthorized traffic to stop cyber-attacks and unauthorized access. BlackRidge was founded in 2010 to commercialize its military grade and patented network security technologies.

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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