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# High-Performance Encryption for Databases in Financial Services

Using Intel® Advanced Encryption Standard New Instructions with InterSystems Caché Substantially Improves Encryption Performance and Reduces Computational Overhead

### Executive Summary

Financial services companies have an ever-growing need to encrypt databases containing sensitive customer and trade data. However, using encryption on these databases can require significant computational resources, potentially impacting trading latencies. Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI), included in the Intel® Xeon® processor 5600 and E5 product families (and more recent Intel Xeon processor families), accelerates encryption and greatly reduces computational overhead.

### Key Findings

Tests show that even as data and computational time increase, there is negligible degradation in performance for encryption or decryption. Use of Intel AES-NI with Caché's interleaved cipher blocks can s

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