PT study shows that enabling Intel QuickAssist Technology can speed up backup times vs. software compression

In hands-on testing, Intel QAT-enabled system sped up database backups compared to an AMD processor-based system with software compression

SANTA CLARA, CA, UNITED STATES, October 8, 2025 /EINPresswire.com/ -- Online transaction processing workloads, such as retail store payment processing systems or reservations systems, need to operate at maximum performance to meet customer demand. At the same time, data protection tasks such as encryption and compression are vital to meeting service level agreements, but these resource-intensive tasks can sometimes slow database performance. To show how hardware-based compression can improve backup speeds, Principled Technologies (PT) tested the backup speeds of an Intel Xeon 6 processor-powered system with built-in hardware compression using Intel QuickAssist Technology (Intel QAT) and an AMD EPYC processor-based system using software compression alone.

Safeguard your data while maintaining SLAs by enabling Intel QuickAssist Technology (Intel QAT)

According to the report, “Customers with Intel Xeon 6 processor-powered systems have another option in their pockets that can offer high compression ratios while delivering faster backups and restores, ultimately reducing CPU overhead and minimizing negative impacts on workloads. As our tests show, enabling Intel QAT

can speed up backup times by up to 41.5 percent over software compression alone—whether your servers continue running workloads during backup or remain otherwise idle during scheduled backup windows.

Taking the extra step to enable hardware-accelerated compression with Intel QAT on your servers can help you safeguard your data through faster backups while ensuring you meet your SLAs—better than using a traditional software-based compression strategy."

The study outlines possible benefits of Intel QAT, saying:

"Intel QAT offers organizations a simple, hardware-driven way to work toward both demands: meeting customer needs and prioritizing performance while simultaneously keeping a strong disaster recovery plan in place. Compared to software compression, which requires additional CPU overhead, hardware-accelerated compression removes some of that burden that can hurt performance. According to Intel, 'Intel QAT offloads compute-intensive compression and decompression operations from the CPU cores, which improves CPU efficiency for greater overall system performance.' This hardware-based acceleration can result in:

- Faster backups and restores: Can significantly reduce the time required for backup and restore operations, especially for large databases.
- Storage savings: High compression ratios lead to smaller backup file sizes.
- Little impact on workload performance: Offloading compression tasks helps to minimize the impact of backup operations on the performance of critical database workloads."

To learn more, read the full report at https://facts.pt/tHW7bPg.

About Principled Technologies, Inc.
Principled Technologies, Inc. is the leading provider of technology marketing and learning & development services.

Principled Technologies, Inc. is located in Durham, North Carolina, USA. For more information, please visit www.principledtechnologies.com.

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