## Google Cloud AMD, MonetaGo

# MonetaGo uses Confidential Computing to detect duplicate financing fraud through secure cross-organization data analysis

Duplicate financing is a relatively simple problem, but one that is surprisingly difficult to solve. It's a financial fraud scheme where a company applies for credit at multiple lending institutions using the same collateral, such as purchase orders and promissory notes similar to a home buyer taking out multiple mortgages with different lenders on the same house. Lending institutions are siloed to protect sensitive customer data and proprietary information, which allows for bad actors to take advantage of firms' inability to share data securely. It's historically been very challenging to learn if a customer applied for credit using the same documents at multiple banks, for instance, especially across borders.

<u>SWIFT Institute</u> estimates duplicate financing could be costing the global financial industry billions and reports that fears around fraud loss is contributing to the trade finance gap, which reached an all-time high of \$1.7 trillion in 2020, the last reported figure.

MonetaGo's mission is simple: to give financial institutions the ability to combat fraud schemes like duplicate financing while protecting customer and company data. To address this pressing need, MonetaGo built Secure Finance, a platform that enables banks to share sensitive lending documents with MonetaGo, which authenticates the information and flags duplicates across multiple institutions in real time — all while remaining in compliance with local regulations and without breaching privacy. This type of secure multi-party analysis wasn't technically possible just a few years ago. But the <u>Google Cloud</u> <u>Confidential Computing solution</u>, which leverages AMD Secure Encryption Virtualization on AMD EPYC<sup>™</sup> CPUs to help protect data in use, changed everything.

# Achieving stringent privacy with global real-time performance

To create Secure Finance, MonetaGo needed a technology that would assure financial institutions that their data is stringently protected while delivering the performance needed for global scale and real-time analysis of billions of documents — no small feat when working within a highly regulated and competitive industry.

"There's no world where MonetaGo can exist where privacy is not our number one concern. Banks have to give us their customers' commercially sensitive data but also have to trust that other banks will not be able to gain any insight into their business," says Brendan Taylor, CTO at MonetaGo.

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"Confidential Computing has unlocked so many capabilities for us and allowed us to maintain the best level of privacy possible. It keeps us one step ahead of the game."



## Google Cloud AMDZ MonetaGo

One particular concern was convincing banks that MonetaGo does all it can to prevent internal breaches. Like any company that handles regulated and sensitive data, MonetaGo implements information security management system (ISMS) policies to address identified risks. "But the root of trust for these operational policies ultimately relies on the good behavior of employees," says Taylor. "The truth is that insider threats, through either negligent or malicious behavior, represent the most significant source of security breaches at tech companies."

# The solution: Confidential GKE and Confidential Space

To address these security concerns while maintaining the performance needed to process and analyze billions of documents and pieces of information in real time, MonetaGo is using <u>Confidential Google</u> <u>Kubernetes Engine</u> (GKE) from Google Cloud, part of the Confidential Computing platform. This helps protect data in process, a crucial feature for MonetaGo as it processes sensitive data from multiple institutions.

While data is currently stored with MonetaGo, which protects it at rest with a multi-key encryption process to ensure no single individual can breach security, the company is working on introducing Confidential Space into Secure Finance. <u>Confidential Space</u> is a new service from Google Cloud that unlocks secure collaboration across organizations and borders. With Confidential Space integrated into Secure Finance, MonetaGo customers can store their own data, which will then be pulled into a permissioned confidential workload for advanced analysis. Financial institutions retain full control over their data with a greatly minimized risk of data breach, even as it is aggregated and analyzed by MonetaGo.

### MonetaGo Confidential Computing deployment details

$\Rightarrow$	Confidential GKE Nodes
⇒	Hosted on AMD EPYC <sup>™</sup> processors
€	Multi-key encryption
€	Confidential Space (in process)

### The power of Confidential Computing

Cloud data exists in three states: at rest, in transit, and in use. The first two states are encrypted via disk encryption or secure communication methods. Traditionally, data in use — as it's being accessed, indexed, searched, or analyzed — is not. <u>Google Cloud</u> <u>Confidential Computing</u> fills this gap by encrypting data in use, a crucial feature for MonetaGo as it analyzes and compares data across competitive institutions with adherence to strict regulations.

## Google Cloud AMD MonetaGo

To accomplish this, Google Cloud uses AMD Secure Encryption Virtualization on AMD EPYC<sup>™</sup> CPUs. This hardware-accelerated memory encryption uses keys to keep data in use encrypted and shielded against rootkits, rogue admins, or infrastructure vulnerabilities. These keys are held within the AMD Secure Processor on an EPYC<sup>™</sup> CPU so not even Google can read them. MonetaGo can easily implement these cutting-edge security measures within new and existing workloads with a simple click of a button.

To analyze financial data from collaborating financial institutions, MonetaGo's Secure Finance system creates digital fingerprints of documents using a hashing algorithm. These fingerprints are registered in a global hash registry, which acts as a secure unified repository. If the system finds the same document has been registered by more than one lender, the duplicates are flagged and affected parties are notified without any confidential information being revealed. Additionally, MonetaGo evaluates the document against reliable data sources to uncover fake or falsified documents.

# Revolutionizing duplicate finance fraud detection

MonetaGo is the first global fraud detection system that specifically targets duplicate finance fraud, as well as the first third-party service for trade finance available through the SWIFT API channel, which services 11,000+ institutions in North America, Europe, Asia, and Australia.

The ultimate mission of MonetaGo, says Taylor, is to "make working capital more accessible to the millions of underserved businesses by reducing risk in trade finance." By enabling financial institutions to indirectly collaborate to combat fraud, Secure Finance can help alleviate the trade credit gap caused when lending institutions limit credit or even pull out of emerging markets due to fraud. Google Cloud's Confidential Computing platform powered by AMD EPYC<sup>™</sup> CPUs makes it possible.

To learn how Google Cloud's Confidential Computing platform, powered by AMD, can help you collaborate securely on joint data sets across teams, organizations, and geographies, visit <u>cloud.google.com/confidential-computing</u>.

