



DIGITAL FORGE A UNIFIED CRYPTOCURRENCY CASE MANAGEMENT PLATFORM

Enhancing Federal Financial Crime Investigations



Executive Summary

The rise of cryptocurrencies has introduced new complexities to financial crime investigations, presenting unique challenges to federal agencies. Existing investigative tools often involve fragmented systems and disparate data sources, hindering efficiency and effectiveness.

Digital Forge, LLC offers a solution: a Cryptocurrency Case Management Offering built on Pega's Investigative Case Management Platform. This unified "single pane of glass" platform integrates diverse data sources and provides seven key investigative workflows tailored for cryptocurrency-related crimes. By leveraging a platform already in use within many federal agencies, this solution accelerates delivery and minimizes implementation risks.

Introduction

Federal agencies tasked with combating financial crimes involving cryptocurrencies face significant challenges due to the limitations of current investigative tools. The investigative environment is often characterized by multiple disconnected systems and databases, leading to inefficiencies, duplication of efforts, and potential oversights.



The unique nature of cryptocurrency transactions—decentralized, pseudonymous, and complex—further complicates investigations. Traditional financial crime investigation tools are not equipped to handle the intricacies of blockchain technology, necessitating specialized solutions that can aggregate and analyze data effectively.

This white paper introduces Digital Forge's Cryptocurrency Case Management Offering, a comprehensive solution designed to streamline and enhance cryptocurrency investigations. By integrating advanced workflows and diverse data sources into a unified platform, we aim to empower federal agencies with the tools necessary to navigate the complexities of cryptocurrency-related financial crimes effectively.

The Need for a Unified Investigative Platform

Investigators are confronted with an overwhelming amount of data from various blockchain and cryptocurrency platforms. Managing and analyzing this data effectively is a daunting task, especially when dealing with disparate systems that do not communicate seamlessly. The difficulty in aggregating data hampers timely and accurate analysis, potentially allowing illicit activities to go undetected or unresolved.

A unified investigative platform offers centralized access to all relevant data and tools, providing investigators with a holistic view of each case. Integrated workflows enhance efficiency, enabling better decision-making and more effective investigative outcomes. By streamlining processes, investigators can focus on critical analysis rather than administrative tasks, improving overall productivity.

Digital Forge Cryptocurrency Case Management Offering

Digital Forge's solution is built on Pega's Investigative Case Management Platform, a technology already deployed in many federal agencies. This strategic choice accelerates delivery and reduces implementation risks by utilizing familiar infrastructure. Investigators can quickly adapt to the new system, minimizing downtime and training requirements.

By combining Digital Forge's expertise in cryptocurrency investigations with Pega's robust platform, we offer a seamless integration for end-users. This partnership ensures that agencies benefit from cutting-edge technology tailored to their specific needs in combating financial crimes involving cryptocurrencies.

Integration of Diverse Data Sources

Effective cryptocurrency investigations require access to a wide array of data sources. Our solution aggregates essential data types from reputable providers to enrich investigative workflows and facilitate efficient case progression as outlined below.



Area 1 - Blockchain Forensics

Examples: Chainalysis, TRM Labs, Elliptic, Arkham Intelligence

Role: Provide tools for threat address discovery and transaction forensics, supplying detailed analyses of blockchain activities.

Area 2 - Crypto Market Information

Examples: ZenLedger, TaxBit, CoinMarketCap, CoinGecko, AnChain.AI

Role: Offer market pricing and cost-basis calculations, delivering real-time and historical financial data.

Area 3 - Open Source Intelligence (OSINT)

Examples: Bitcoin Who's Who, Scam Search, Chainabuse.com

Role: Enrich data analytics with publicly available information, aiding in the identification of fraudulent activities and entities.

Area 4 - Entity Information

Examples: Sarayi

Role: Provide detailed information on entities involved in transactions, supporting due diligence and risk assessment.

Area 5 - Blockchain Integration

Examples: Breadcrumbs, Bitquery, Allium, Blockchain.com, Etherscan.io

Role: Enable direct access to blockchain data for real-time analysis and monitoring.

Area 6 - Integrations with Virtual Asset Service Providers (VASPs)

Examples: Breadcrumbs, Bitquery, Allium, Blockchain.com, Etherscan.io

Role: Facilitate interactions, data sharing and legal document correspondence with cryptocurrency exchanges and other service providers.

By integrating these diverse data sources into the Pegasystems platform, investigators can access comprehensive information within a single interface, enhancing the depth and accuracy of their analyses.



Key Investigative Workflows and Features

Our Cryptocurrency Case Management Offering provides seven major workflows designed to support investigators in handling cryptocurrency-related financial crimes and integrated with the above data sources as illustrated and explained below.



Cryptocurrency Threat Address Discovery

- Utilize data from blockchain forensic tools (e.g., Chainalysis, TRM Labs) to identify suspicious cryptocurrency addresses.
- Import and manage threat intelligence data within the case management system for efficient tracking.

Cryptocurrency Transaction Forensics Data Integration

- Pull detailed transaction data from external forensic tools after analysis.
- Integrate documented findings into cases within the Pega platform, ensuring all relevant information is centralized.

Data Analytics & Data Enrichment

- Aggregate data from various sources, including OSINT and entity information providers.
- Enhance raw data with contextual information to provide deeper insights into activities and entities.

AI-Powered Legal Document Generation

- Automate the creation of legal documents such as subpoenas, warrants, and affidavits.
- Ensure documents are compliant with legal standards and tailored to specific case requirements.



Cryptocurrency Market Pricing and Cost-Basis Calculations

- Access real-time and historical pricing data from market information providers.
- Calculate asset values for purposes such as seizure, forfeiture, and financial analysis.

Automated Address & Transaction Monitoring

- Continuously monitor specified cryptocurrency addresses and transactions for suspicious activity.
- Receive real-time alerts within the case management system to prompt timely investigative actions.

Data Analytics & Data Enrichment

- Aggregate data from various sources, including OSINT and entity information providers.
- Enhance raw data with contextual information to provide deeper insights into activities and entities.

Forfeiture/Seizure Management

- Manage seized cryptocurrency assets within a compliant and secure framework integrated with custody providers.
- Streamline the forfeiture process from initiation through resolution, including documentation and reporting.

These workflows are designed to enhance investigative efficiency by centralizing data and automating routine tasks, allowing investigators to focus on analysis and decision-making.

Advantages of an Integrated Solution

Enhanced Investigative Efficiency

By streamlining workflows and reducing manual effort, the solution accelerates case resolution. Investigators can access all necessary tools and information within a single platform, eliminating the need to switch between disparate systems.

Comprehensive Data Access

The centralized platform provides a holistic view of all relevant data, improving the depth and accuracy of investigations. Integration of diverse data sources ensures that investigators have the most current and comprehensive information available.

Improved Accuracy and Compliance

Automation minimizes errors in data handling and document generation, ensuring adherence to legal standards and agency protocols. This reduces the risk of procedural mistakes that could compromise cases.



Scalability and Adaptability

The flexible architecture allows for the integration of new data sources and technologies as the cryptocurrency landscape evolves. Agencies can adapt the solution to meet emerging threats and investigative needs.

Implementation Strategy

Leveraging Existing Infrastructure

By utilizing the Pega platform already in use within many agencies, the solution ensures a seamless transition with minimal disruption. Familiarity with the underlying technology reduces the learning curve for investigators.

Customization and Flexibility

The solution can be tailored to meet the specific needs and policies of each agency. Workflows, data integrations, and user interfaces can be customized to align with existing processes and objectives.

Risk Mitigation

A phased deployment approach minimizes implementation risks. Ongoing support from Digital Forge and Pega ensures any issues are promptly addressed, and updates are smoothly integrated.

The rapidly evolving nature of cryptocurrency-related financial crimes necessitates immediate action to upgrade investigative tools and methodologies. Federal agencies must stay ahead of sophisticated criminals who exploit technological advancements to their advantage.

Use Case Example

Agents investigating a case uncover new evidence in the form of blockchain addresses that cryptocurrencies were utilized in the act of a financial crime. Starting with the Unified Cryptocurrency Case Management Platform, agents input the addresses to query multiple data sources simultaneously and receive an automated analysis generated by the combination of transaction flows, address attributions, open source intelligence, market information and exchange activity. Agents seamlessly add evidence to the Pega case while receiving specific guidance on where to concentrate their next investigative efforts.

The result is less time spent in a “swivel-chair” mode switching between standalone blockchain forensic tools and data sources and more time spent discovering, documenting and capturing direct digital evidence that will lead to faster case closure and prosecutorial success.

About Digital Forge, LLC

Digital Forge advances digital design and transformation of enterprises into world-class, high performing organizations ready to take on the challenges associated with an ever-accelerating emergence of new technologies and increasingly hard to meet customer expectations. Our integrated digital design and transformation framework encompasses a holistic digital strategy combined with low-code/no-code application platforms such as Pega and ServiceNow and state-of-the-art blockchain capabilities to ensure your business outperforms competitors and pleases customers for years to come. With decades of experience in strategy, management and IT consulting experience, our team of highly skilled practitioners partners with clients to achieve new levels of success.

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