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DataPatrol

Discover and protect sensitive with built-in isolation and ticketing mechanism

Overview

Most organizations tend to collect large volumes of sensitive data (PII/PHI/PCI), which they use to provide relevant customized services to its clients. It is critical to identify and protect the collected sensitive data from any unauthorized disclosure and it is the responsibility of every organization to effectively discover, control and manage their sensitive data footprints and comply to the data protection laws relevant to the country and its industry. Existing third party solutions for sensitive data discovery lack ML prowess and cloud integration capabilities to tackle sensitive data leaks and are often too expensive to adopt in real-time use-cases.

Hence, having robust automation and bringing new scalable ML supported technologies to detect sensitive data at point of ingestion/integration and take necessary actions to avoid any leakage becomes critically important.

DataPatrol is an AWS native solution developed by HCLTech to address the need for sensitive data identification, protection and informing users through a completely automated manner leveraging AI/ML principles that are fully configurable to handle any data pattern.
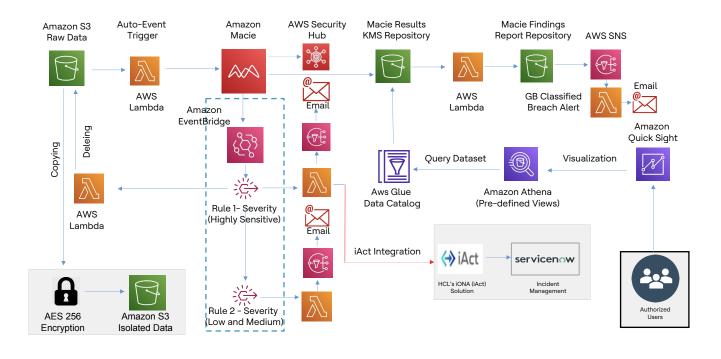
DataPatrol Framework

To address this demand and to improve the sensitive data discovery and governance in AWS environment, HCLTech has provisioned a framework, referred as DataPatrol Framework. It is built using rich set of AWS services like Amazon Macie, AWS Lambda, AWS Security Hub, Amazon EventBridge, Amazon SNS, Amazon QuickSight among other services to accomplish critical tasks during the life cycle of sensitive documents being patrolled.

Key Features

This solution comprises of the following key features, each having several interesting capabilities that are crucial for building a robust and complete data patrolling solution

- **Sensitive data discovery** - Fully managed, updated machine learning techniques for PII detection and ability to define and use custom datatypes using regular expressions have proven to deliver quality discovery of variety of sensitive datatypes from customer's source data
- **Secure data isolation & encryption** - This feature will assist in effective isolation of high sensitive data files right at the ingestion layer in itself and prevent further leakage to the downstream systems
- **Severity based email alerts** - Based on the Amazon EventBridge events, this workflow automatically triggers Amazon SNS service to send custom email notifications to its subscribed users containing critical details on the sensitive data file location along with its severity level warnings (High/Medium/Low)
- **Audit & compliance reports** - A consolidated DataPatrol report for each patrolling job will be auto-downloaded to a customer specified location for quick review and action on the findings
- **Centralized management of sensitive data findings** - Integration with AWS Security Hub provides a comprehensive vision and security findings management strategy to aggregate and analyze all high sensitive data findings from a single window stored as a standard AWS Security Finding Format (ASFF) for further processing
- **Incident reporting & management** - HCLTech's DataPatrol framework is fully integrated with its iONA (iAct) solution to auto-create incident in ServiceNow tool for every high severity detection and assign to appropriate user group for further review and action
- **DataPatrol dashboard** - It is fully capable to deliver pre-built ML driven insights with auto-narratives that are embedded contextually in the dashboard using natural language for quick interpretation.

Amazon S3 Raw Data · Auto-Event Trigger · AWS Lambda · Amazon Macie · AWS Security Hub · Macie Results KMS Repository · Macie Findings Report Repository · AWS SNS · Amazon EventBridge · Email · Copying · Deleing · AWS Lambda · Rule 1- Severity (Highly Sensitive) · Email · Rule 2 - Severity (Low and Medium) · AES 256 Encryption · Amazon S3 Isolated Data · iAct Integration · HCL's iONA (iAct) Solution · servicenow Incident Management · AWS Lambda · GB Classified Breach Alert · Email · Amazon Quick Sight · Visualization · Amazon Athena (Pre-defined Views) · Query Dataset · Aws Glue Data Catalog · Authorized Users

Benefits

HCLTech's DataPatrol architecture leverages native AWS Services for sensitive data discovery and analytics. Key benefits of the solution includes:

- Ability to swiftly identify and discover sensitive data including Personal Identifiable Information (PII), Personal Health Information (PHI) and Payment Card Industry (PCI)
- Provision to move high sensitive files out from source to a secure target location and prevent sensitive data leak
- Ability to notify users with custom email alerts upon sensitive data breaches
- Equip businesses with a consolidated view of DataPatrol report in an easily readable format (csv) to review the sensitive data findings for audit & compliance requirements
- Collate, monitor and process sensitive data findings coming from DataPatrol into a centralized hub, thereby providing a comprehensive view of security state and high priority security issues
- Provisioning seamless integration with ServiceNow tool to automatically raise incidents for every high severity alert
- To empower business users with rich pre-configured ML driven dashboards to review the key insights on sensitive data for all of the processed DataPatrol jobs

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