Domain: GCP Asset Inventory

Commented [F[1]]: Love it. This is great. I am good with this as a template. Thanks @Alsaloom, Mohamed [TECH].

Objective	Implement a Comprehensive Inventory Management System on GCP Platform that provides insights into resources deployed on GCP and publish the resource data to various consumers (including IDEAs). As a cloud operations and engineering team, we want to implement a system for tracking, managing and optimizing all cloud resources across GCP to ensure visibility and compliance with asset management requirements of Citi. **Consideration:** ▪ Ability to collect and display metrics and logs for all GCP hosted applications, infrastructure, and services. ○ This has a dependency on various service enablement teams for various GCP services and infrastructure. ▪ Build customized dashboards with real-time visualizations for key performance indicators for Cloud Operations and Mission Control. ▪ Configure alerts based on thresholds for key SLOs and integrate alert pipeline with Citi infrastructure and service management system. ▪ Support for end-to-end tracing of requests across application and infrastructure boundaries. ▪ Ability to correlate events from different services for faster issue resolution and root cause analysis
Acceptance Criteria	• Automatic resource discovery is enabled across all GCP projects and regions. • A centralized inventory list is generated showing all resources, their types, and locations. • New resources are added to the inventory in real-time when created or deployed • A centralized dashboard lists all resources by type (Compute, Storage, Network, etc.). • Resource details include project name, region, resource type, status, and configuration. • The dashboard includes filter options by project, region, and resource type • Resources can be tagged with custom labels (e.g., cost center, department, environment). • The inventory management system supports bulk tagging for existing resources. • Reports can be generated based on tags to track resource usage and costs by category • Configuration details for each resource are tracked and stored in the inventory. • Compliance checks are run to ensure that resources adhere to security policies (e.g., encryption, firewall settings). • Non-compliant resources are flagged, and alerts are generated for remediation • The system generates a visual map showing dependencies between resources (e.g., compute instances connected to databases and storage).

	• I can view resource relationships by project, region, and network configuration. • The map is updated dynamically as resources are added, removed, or reconfigured • Alerts are triggered when significant changes are made to critical resources (e.g., firewall rules, VM shutdowns). • Alerts can be configured based on resource type, change type, or severity. • All resource changes are logged and linked to user actions for audit purposes • The system syncs GCP resource data to DRIFT System in a timely manner (according to SLO). • Differences between resource data in DRIFT and GCP asset are flagged. • Alerts are triggered if drift is detected between Google Asset Inventory and GCP resources in DRIFT • The system stores historical data on resource creation, modifications, and deletions. • I can generate reports showing resource changes over time (e.g., scaling up/down, reconfigurations). • The inventory system includes audit logs with details of who made changes and when • The system stores latest snapshot of cloud resource information. • I can generate reports showing resource details and attributes. • The inventory api that have GET/POST routes to retrieve data in JSON format. • The system stores latest snapshot of cloud resource information. • The inventory api that have GET/POST route to retrieve GCP project details for given CSI.
Stakeholders	Cloud Operations, Cloud SRE, Cloud FinOps, Cloud SDLC, Cloud Risk & Control, EAP, VDI team.
Resourcing	3 GCP Cloud Engineers
Milestones	Dev Milestone 1 – Nov 2024 • Completion of gcp asset inventory pipeline to DRIFT • Close FID CAP related to vault integration for Kafka Connector Dev Milestone 2 – December 2024 • Tactical GCP Inventory API service to support CICD Pipeline • Onboarding GCP resource to the asset inventory pipeline. • Integration of Cloud Trace & Cloud Error reporting into project vending process Dev Milestone 3 – Mar 2025 • Ongoing onboarding of additional gcp resource to the asset inventory pipeline. • GCP Automatic Asset Recon & Drift Detection • Strategic GCP Inventory Service (Query APIs) • GKE Container Asset Inventory PROD – Apr 2025

	Post PROD • GCE VM Asset Inventory. • GCP Resource Label Validation and Alerting.
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