

# Gen3 CSOC WG Kickoff

December 9, 2024

## **What is a CSOC?**

A commons services operations center (CSOC) is used by organizations that run more than one Gen3 system. A CSOC allows a team of engineering and security staff to set up, configure, secure, operate, and monitor two or more data commons or data meshes

## **What is the CSOC WG Mission?**

The Gen3 CSOC Working group will focus on topics and Gen3 improvements to benefit those organizations managing multiple Gen3 systems. Part of the working group focus will be on the development of dashboards and tools that will enable an administrator to configure, launch, and monitor a data commons or mesh. We will also discuss and work on other improvements and topics of interest to multi-Gen3 organizations.

- CSOC WG Mission
- Logistics
- Team Introductions - Introduce yourself, your team, your Gen3 set up and plans (4 minutes max each)
- CSOC Use Cases
- CSOC Requirements and Roadmap
- Next Steps

- Monthly Meetings
  - Will send out doodle poll shortly to schedule series of monthly meetings.
- Dedicated Slack Channel
  - You should have received an invite already to the new [dedicated slack channel](#) within the Gen3 Friends slack workspace. Reach out to to me or [support@gen3.org](mailto:support@gen3.org) if you are not able to access the workspace.
- Minutes, Recordings, and Agendas will all be on [GitHub](#)

- Introduce yourself, your team, your Gen3 set up and plans
- Any pain points you have in terms of set up and maintenance
- Please keep to a few minutes max

## Use Cases

1. CSOC admin creates commons that are all centrally managed. Assumes existing Kubernetes infrastructure (with an Enterprise IT admin)
2. CSOC admin creates the required kubernetes enterprise infrastructure over which individual commons are set up, which are all then centrally managed
3. CSOC admin sets up multiple data commons (either model #1 or #2), with each commons able to be configured and operated by their individual Commons Admin

## Purpose

- **Centralized Management:**
  - Develop a unified platform to manage and secure multiple Gen3 instances.
- **Enhanced Capabilities:**
  - Empower organizations to maximize Gen3's potential with security and operational efficiency.

## Goals

- Streamlined Gen3 Operations: Simplify deployment processes and ongoing management tasks.
- Tool Integration: Enable seamless connections with industry-leading monitoring and security tools.
- Community Collaboration: Foster a culture of knowledge sharing and collaboration within the Gen3 community

## Progress

- **Core Platform Development:** The foundational CSOC platform is actively under development, with key components already functional.

## Features

- **Kubernetes Dashboard**
  - Fully featured interface for cluster management.
- **Agent-Based Solution**
  - Lightweight design for managing multiple Kubernetes clusters.
- **Helm Integration**
  - Simplified management of Helm deployments.
  - Support for discovering and deploying applications from repositories.
- **Gen3 Deployment Wizard**
  - Intuitive tools for configuring and deploying Gen3 environments.
- **Authentication Integration**
  - Basic integration with Keycloak for streamlined user authentication.
- **Centralized Management**
  - Unified oversight of all Gen3 deployments.



## Core Features

1. Monitoring and Observability
  - Comprehensive integration with Grafana for advanced monitoring capabilities.
2. Cloud Integration
  - Track cloud spending across multiple accounts.
  - Enable seamless provisioning and management of cloud infrastructure components:
    - Networking
    - Databases
    - Kubernetes clusters

## Security Features

1. Enhanced Authentication and Authorization
  - Implement robust RBAC (Role-Based Access Control).
2. Access Control
  - Enforce IP restrictions to control dashboard access.
  - Only allow whitelisted IP addresses or implement alternative restriction mechanisms.

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