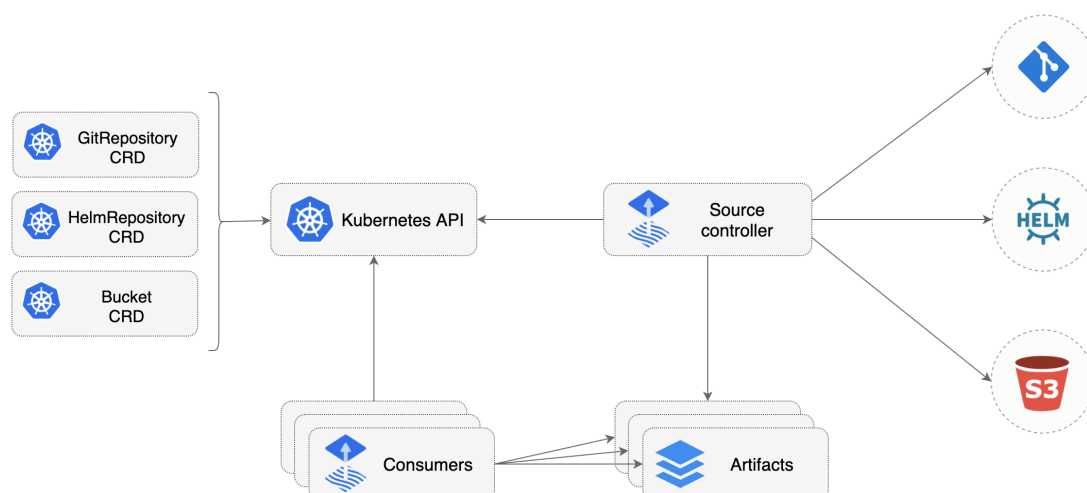


# Source Controllers

## Source controller

The main role of source-controller is to provide a common interface for artifacts acquisition. The source API defines a set of Kubernetes objects that cluster admins and various automated operators can interact with to offload the Git and Helm repositories operations to a dedicated controller.



Features:

- Validate source definitions
- Authenticate to sources (SSH, user/password, API token)
- Validate source authenticity (PGP)
- Detect source changes based on update policies (semver)
- Fetch resources on-demand and on-a-schedule
- Package the fetched resources into a well-known format (tar.gz, yaml)
- Make the artifacts addressable by their source identifier (sha, version, ts)
- Make the artifacts available in-cluster to interested 3rd parties
- Notify interested 3rd parties of source changes and availability (status conditions, events, hooks)

Links:

- Source code [fluxcd/source-controller](https://github.com/fluxcd/source-controller)
- Specification [docs](https://fluxcd.io/flux/components/source/)

## Source watcher

The source-watcher is a GitOps toolkit controller that extends Flux with advanced source composition and decomposition patterns.

The source-watcher controller implements the **ArtifactGenerator** API, which allows Flux users to:

- **Compose** multiple Flux sources (GitRepository, OCIRepository, Bucket) into a single deployable artifact
- **Decompose** monorepos into multiple independent artifacts with separate deployment lifecycles
- **Optimize** reconciliation by only triggering updates when specific

paths change

- **Structure** complex deployments from distributed sources maintained by different teams

Links:

- Source code [fluxcd/source-watcher](https://github.com/fluxcd/source-watcher)
- Specification [docs](#)

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## **Controller Options**

Controller command flags and defaults.

## **Git Repositories**

The GitOps Toolkit Custom Resource Definitions documentation.

## **OCI Repositories**

The GitOps Toolkit Custom Resource Definitions documentation.

## **Buckets**

The GitOps Toolkit Custom Resource Definitions documentation.

## **Helm Repositories**

The GitOps Toolkit Custom Resource Definitions documentation.

## **Helm Charts**

The GitOps Toolkit Custom Resource Definitions documentation.

## **External Artifacts**

The GitOps Toolkit Custom Resource Definitions documentation.

## **Artifact Generators**

The GitOps Toolkit Custom Resource Definitions documentation.

## **API Reference**

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Last modified 2025-09-23: [Add source-watcher to components \(9b43282e\)](#).