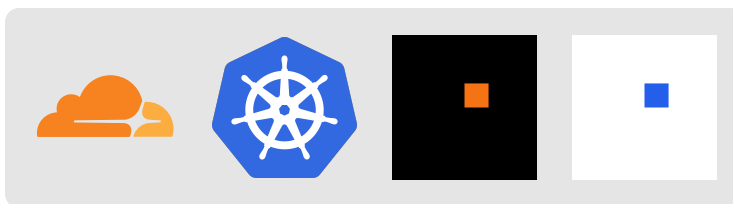




Kubernetes Gateway API Operator for Cloudflare

Manage tunnels, DNS, and access policies as Kubernetes resources.



<https://cfgate.io> | <https://github.com/cfgate/cfgate> | <https://inherent.design>

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The Problem

What	Where
Tunnels	Dashboard or API
DNS records	CLI or Terraform
Access policies	Dashboard

k8s + cf = 3 tools minimum

- config drifts between interfaces
- each tool has its own state
- two pre-existing operators:
 - neither has both Gateway and Access

The Solution

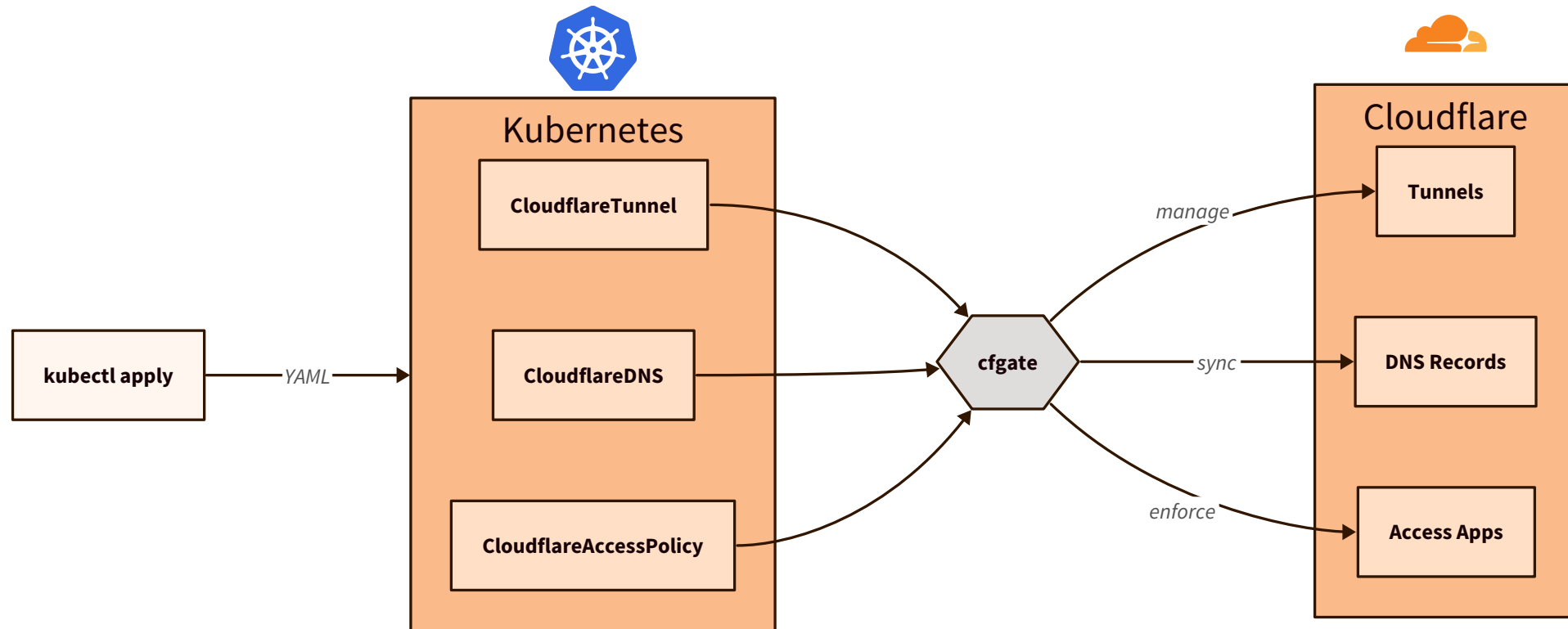
cfgate provides three CRDs that bring:

- tunnels
- DNS
- access policies

into Kubernetes

Kubernetes CRD	Purpose
CloudflareTunnel	manages tunnel lifecycle
CloudflareDNS	syncs DNS records with ownership tracking
CloudflareAccessPolicy	enforces identity-aware access rules

How It Works



How It Works (cont.)

- **cf**gate uses Gateway API
 - GatewayClass
 - Gateway
 - HTTPRoute
- same routing standard as
 - Envoy
 - Istio
 - Cilium

Cloudflare Tunnel proxies traffic directly to in-cluster services, so the cluster needs no public IP, no ingress controller, and no load balancer.

Production Today

Service	Route
ArgoCD	argocd.inherent.design
Portainer	portainer.inherent.design
Directus CMS	cms.inherent.design
PostgreSQL 18	internal (no public route)

- zero public ports
- Cloudflare Access gates all endpoints
- Google Workspace OIDC
- DNS records sync automatically

Competitive Landscape

Feature	cfgate	adyanth/cloudflare-operator	STRRL/tunnel-ingress-controller
Gateway API	Yes	No (Ingress)	No (Ingress)
Access policies	CRD	No	No
DNS management	CRD	No	No
L4 routing (TCP/UDP)	Planned	No	No
Multi-cluster	Planned	No	No

Roadmap

Phase	Timeline	Deliverables
M1	Months 1 to 3	Gateway API conformance tests, TCPRoute/UDPRoute support
M2	Months 4 to 6	Multi-cluster tunnel management, Prometheus metrics, Grafana dashboards
M3	Months 7 to 9	cfgate.io docs on Workers, CRD reference, migration guides
M4	Months 10 to 12	Security audit remediation, CNCF Sandbox application

Credits Usage Plan

\$250K Cloudflare credits allocated across

Use	Cloudflare Products
Conformance testing CI	Workers, R2 (test artifacts), API calls
Multi-cluster test environments	Tunnels (multiple clusters under one account)
cfgate.io	Workers/Pages, R2 (release assets)
Integration tests	Live Cloudflare API (tunnels, DNS zones, access apps)
Monitoring	Workers Analytics, Logpush
Distribution	OCI registry hosting, Artifact Hub metadata

Team

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I wrote all of cfgate and run my own infrastructure through it. The production k3s cluster is fully behind cfgate-managed Cloudflare tunnels.

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GitHub: <https://github.com/cfgate/cfgate>

<https://cfgate.io> | <https://github.com/cfgate/cfgate> | <https://inherent.design>

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