OpenGeoMetadata API Mirror Network

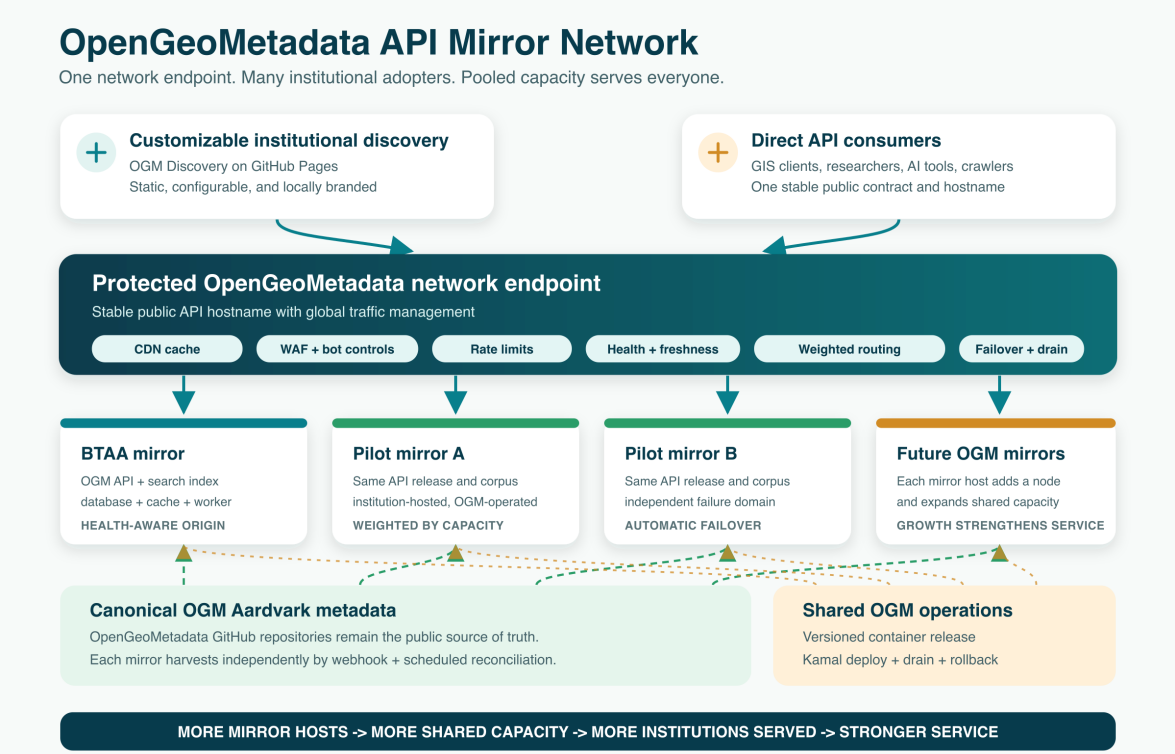
Shared infrastructure that becomes stronger with every new member

EXECUTIVE SUMMARY

OpenGeoMetadata already has the essential building blocks: the OGM Aardvark schema, public GitHub metadata repositories, a proven API, and the configurable **OGM Discovery** (**ogm-discovery**) frontend for GitHub Pages.

The proposed mirror network adds a protected global endpoint in front of compatible institutional OGM API nodes. Mirror hosts contribute an ordinary Linux VM; the OGM operator deploys and updates the application with Kamal, synchronizes the corpus, monitors readiness, and routes traffic by health and capacity.

Capacity is pooled, not an admission requirement. Smaller libraries can publish metadata and launch a customizable, institution-branded discovery site against the shared API *without operating a local backend*. Mirror hosts add resilience for everyone; service-only adopters add collections, expertise, and public value.



Public read path, metadata synchronization, and shared operations

One contributed mirror becomes a community multiplier: it supports its host, strengthens the shared service, and opens a no-backend path for smaller institutions to join OpenGeoMetadata discovery.

The smallest possible institutional ask; network-wide return

Mirror hosts supply capacity. Service-only adopters need no backend. Every member benefits.

COST AND EFFORT

$1,500 / year

planning target per externally purchased mirror node

Reference: 16 vCPU, 64 GB RAM, 500 GB usable SSD/NVMe, 1 Gbps.
Sized from BTAA production; target 4-8 provisioning hours plus a few host-support hours per quarter.

Campus VM: little or no incremental cost.
Service-only adopter: $0 API hosting.

WHY THIS IS INEXPENSIVE

No local software project. No institution-specific backend. No frontend server. No cross-campus database replication. Public Aardvark records in GitHub remain canonical, so indexes and caches are rebuildable.

The closest public hardware benchmark is a 16-thread / 64 GB / 2x512 GB NVMe dedicated server at about $117 per month. Shared edge and monitoring costs are budgeted once for the network, not once per campus.

MIRROR HOST PROVIDES

One production VM
Firewall, DNS, SSH, and OS coordination
One service sponsor + one technical contact

OGM OPERATES

Kamal install, drain, update, and rollback
Harvest, index, cache, and monitor
Health-aware traffic weights + incidents

COMMUNITY-WIDE RETURN

Service-only adoption with no backend
Customizable, institution-branded discovery
More metadata, capacity, and resilience

DECISION REQUESTED

Approve a **90-day pilot**: the current BTAA node plus two additional institutional mirrors and one service-only adopter. Measure onboarding, cost, API compatibility, corpus freshness, traffic distribution, bot protection, failover, and infrastructure-free adoption. Return with a production governance and service-level proposal.

Planning sources: opengeometadata.org; github.com/opengeometadata; github.com/geobtaa/api; github.com/ewlarson/ogm-api; github.com/ewlarson/ogm-discovery; Hetzner price adjustment (2026-06-15); Cloudflare Load Balancing docs.