

DEV upgrade strengthens the platform foundation

DynaStore / GeoID v0.20.83 -> v0.27.89

Four active service domains

Maps Catalog Auth Tools/Tasks

The upgrade changes platform readiness, not just version number

Platform stability

Fail fast

Bounded DB pool waits, safer pool sizing, and heavy work routed through task runners.

Data integrity

Trust data

STAC-aware item handling, stable identifiers, geometry fidelity, and tenant boundaries.

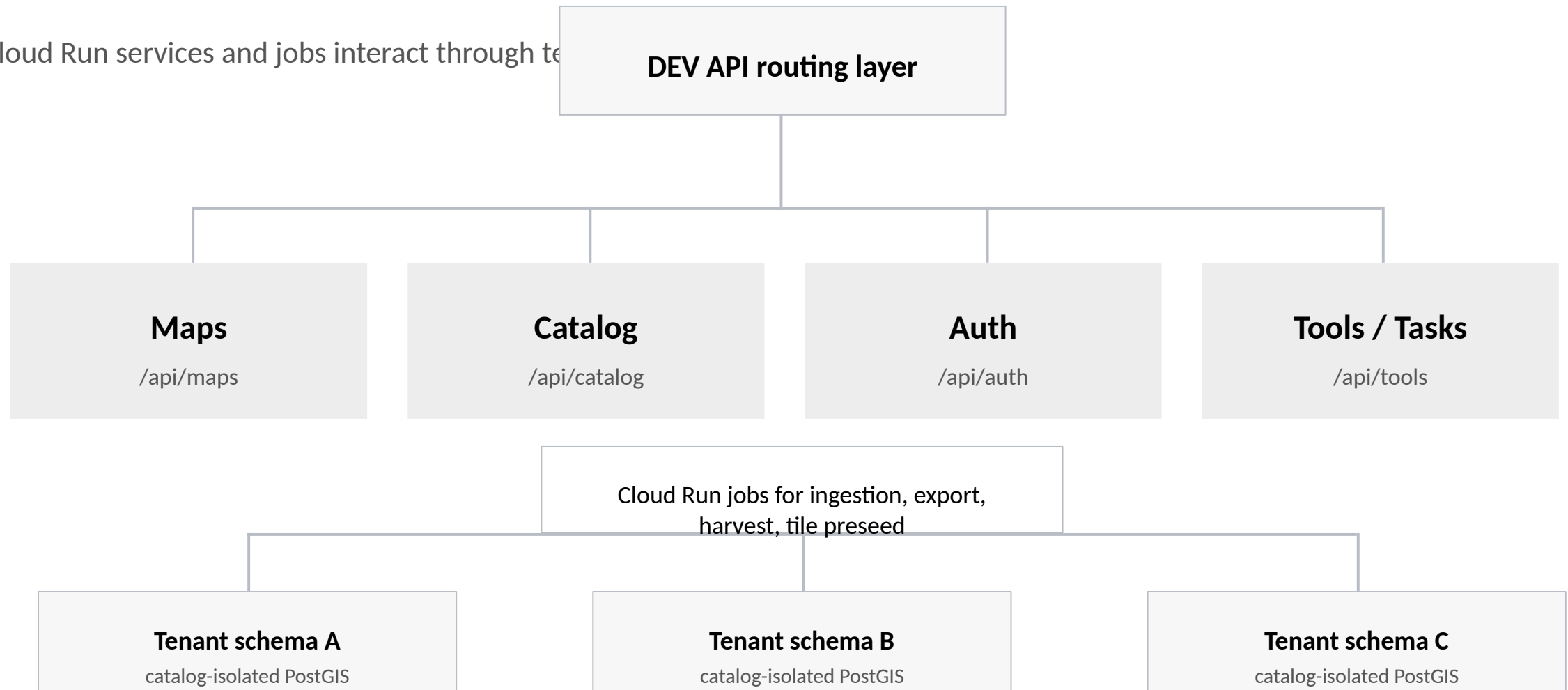
Interoperability

Reuse APIs

OGC-native Maps, Tiles, Records, Features, STAC, and OpenAPI contracts.

DEV now runs as four clear service domains

Cloud Run services and jobs interact through the



Stability improves when saturation fails fast

Before the upgrade risk

- A saturated database pool could hold request workers too long.
- Long-running processing could compete with interactive API traffic.
- Operational failures were harder to interpret during load spikes.

v0.27.89 operating behavior

- Pool acquisition has a bounded wait and fails predictably.
- Unsafe pool sizing is surfaced early and guarded at startup.
- Cloud Run jobs handle heavy ingestion, export, harvest, and preseed work.

Leadership meaning: service pressure is easier to detect, contain, and recover from.

Catalog integrity protects trust in agricultural evidence

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|---|------------------------------|---|
| ■ | STAC-aware structures | Catalogs, collections, and items are represented through STAC-oriented models and navigation links. |
| ■ | Stable item identity | Public item IDs resolve predictably from external IDs or platform-generated identifiers. |
| ■ | Geometry fidelity | Fast projections support search, while exact geometry can be requested when precision matters. |
| ■ | Tenant-aware storage | Catalogs map to isolated physical storage rather than relying only on application filters. |

OGC-native APIs make crop and land data reusable

The upgraded DEV environment exposes standards-oriented surfaces through updated OpenAPI contracts.

This lowers integration friction for GIS tools, web maps, dashboards, and partner pipelines.

Discover

STAC
Records
Features

Visualize

Maps
Tiles
Styles

Filter

CQL2-style filters
Datetime
Subset

Automate

Processes
Tasks
OpenAPI

The four service domains now have clearer value

Service domain	Value now visible in DEV
Maps	Faster map and tile delivery for crop and land visualization.
Catalog	More reliable STAC, Records, Features, and metadata discovery.
Auth	OIDC login, normalized principals, policy checks, and tenant-aware delegation.
Tools / Tasks	Observable long-running work with retries, heartbeats, and dead-letter handling.

DEV can now validate real programme workflows, not only endpoint availability.

Recommended launch rhythm

Use DEV to turn the upgrade into confidence, evidence, and a clear promotion path.

1

Validate

Smoke-test OpenAPI, auth, STAC discovery, representative maps, and task status flows.

2

Walk through

Brief stakeholders with the visual report and this deck using one crop or land mapping example.

3

Publish

Use Quarto for the web report and PDF attachment, then link the report in the launch email.

4

Promote

After DEV validation, prepare release notes and operational checks for the next environment.

Central message: the platform is now more stable, more trustworthy, and easier to integrate.