CORESPATIAL

A complete open-source geospatial platform that publishes, manages, and visualizes data, hardened for secure government and defense networks.

10M+

requests/day on a single instance

10+ yrs

DoD production past performance

70%+

imagery latency reduction for SOF

CoreSpatial Product Overview

NGS SOLUTIONS DELIVERED

Best-of-breed OSGeo software integrated into one cohesive, supported platform, delivered as a subscription. Deploy on your infrastructure, your cloud, or ours, with no licensing constraints and no vendor lock-in.

CoreSpatial Server

Hardened, OGC-compliant GeoServer + PostGIS engine.

CoreSpatial Basemaps

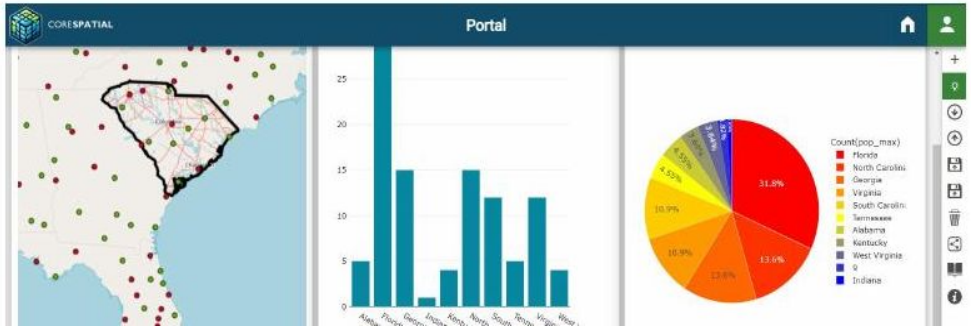
Curated global imagery, elevation, and grids.

CoreSpatial Map Manager

Drag-and-drop imagery ingest and publishing.

CoreSpatial Portal

Browser maps, dashboards, and story maps.



CHIEF DIGITAL AND ARTIFICIAL INTELLIGENCE OFFICE
AWARDABLE
TRADEWINDS SOLUTIONS MARKETPLACE

One open platform, no lock-in

CoreSpatial integrates proven OSGeo components into a single, cohesive stack. Every layer is open, standards-based, and replaceable, so your systems can adapt over time.

100% open source

GeoServer, PostGIS, GDAL, MapStore2, OpenLayers, CesiumJS.

OGC-native services

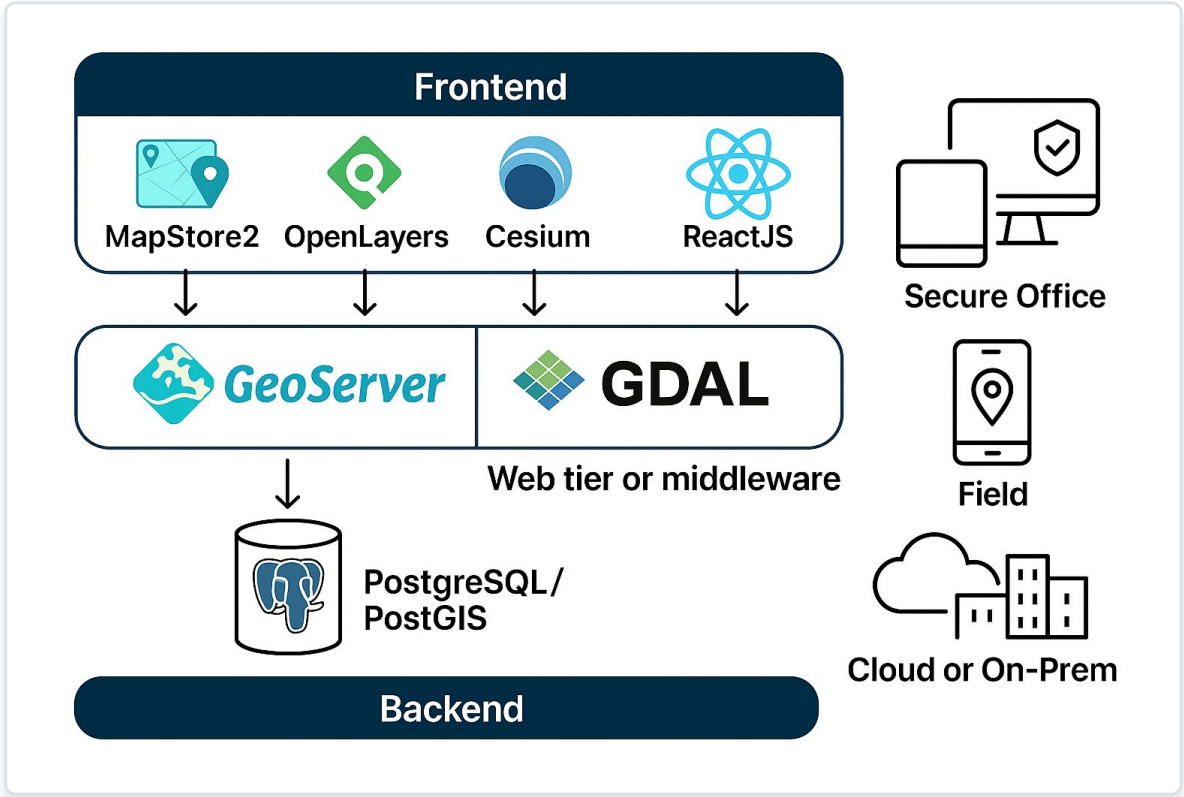
WMS, WFS, WMTS, WCS, WPS, vector tiles, and 3D Tiles.

Secure by design

PostgreSQL RLS, Keycloak SSO with CAC/PIV, layer ACLs, SBOMs.

Deploy anywhere

The same platform across SCIF, GovCloud, and hybrid.



CoreSpatial reference architecture

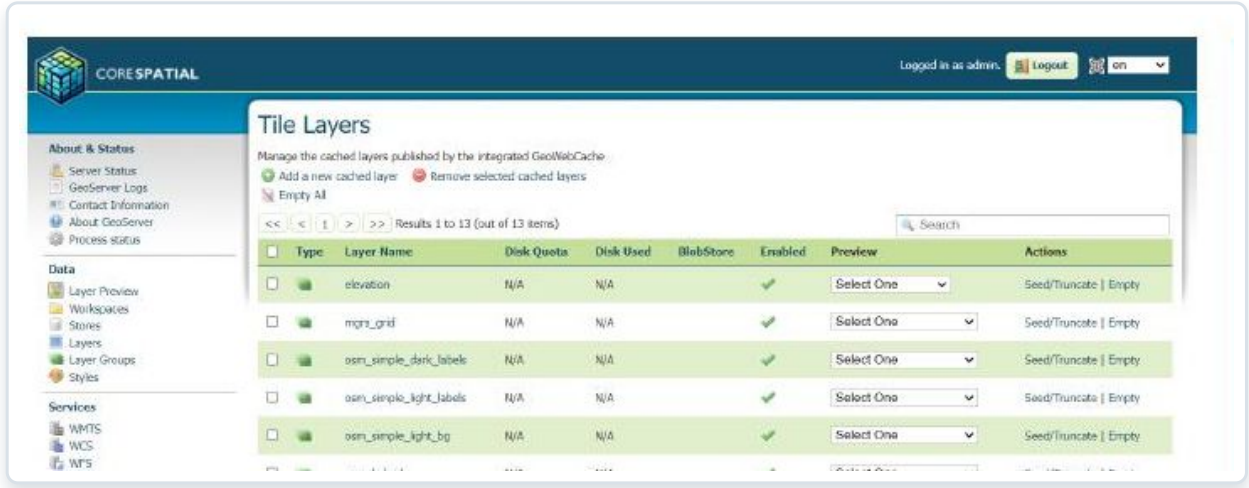
Host and serve geospatial data securely

The engine of the platform: a hardened, scalable, OGC-compliant GeoServer paired with PostgreSQL/PostGIS and GDAL for advanced spatial processing, proven in high-throughput production.

- **GeoServer + PostGIS + GDAL** An NGS-tuned distribution with extensions pre-installed and configured.
- **Hardened for any network** Aligned to DISA STIG and CISA guidance for cloud, on-prem, and air-gapped.
- **High-throughput proven** 10M requests/day on a single instance, with monitoring and capacity planning.
- **Maintained for you** Quarterly releases keep components current; High/Critical CVEs patched immediately.

BUILT ON

GeoServer · PostGIS · GDAL



CoreSpatial Server: tile-layer administration and cache management.

AT A GLANCE

OGC SERVICES	WMS · WFS · WMTS · WCS · WPS · vector tiles · 3D Tiles
FORMATS	NITF · DTED · RPF · JPEG2000 · MrSID · GeoPackage · MBTiles
ASSURANCE	DISA STIG + CISA hardening · SBOMs · immediate CVE patching

A global foundation, ready on day one

A curated package of pre-rendered, production-ready basemap layers built from free, publicly available data, so your teams start building immediately without sourcing or tiling their own.

- **Start immediately** Pre-rendered global coverage means no need to source or tile your own data.
- **Imagery and elevation** OpenStreetMap, Landsat and BlueMarble imagery, plus SRTM elevation.
- **Military grids included** NGA MGRS and UTM grid layers shipped as standard.
- **Production-ready delivery** Includes loading scripts, caching configs, and high-availability support.

BUILT ON

GeoServer · PostGIS · OpenStreetMap

Curated global imagery, served through CoreSpatial Server.

AT A GLANCE

IMAGERY	OpenStreetMap · NASA/USGS Landsat · NASA BlueMarble
REFERENCE	CGIAR SRTM elevation · Natural Earth · NGA MGRS + UTM
DELIVERY	loading scripts · caching configs · HA support · extend via scripts

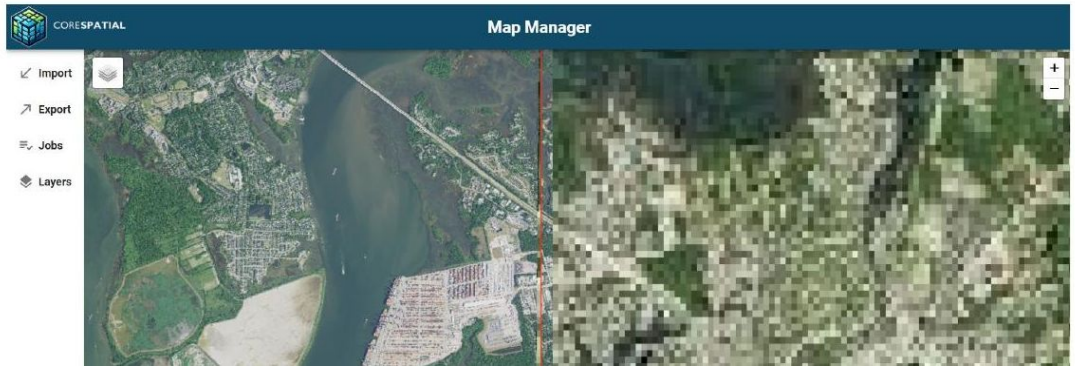
Publish imagery, no GIS expertise required

A browser-based interface for importing and managing new imagery and elevation data. Drag and drop a dataset; Map Manager handles preprocessing, tiling, and publishing automatically.

- **Drag-and-drop ingest** Upload imagery directly in the browser, with no desktop GIS required.
- **Automatic preprocessing** WGS84 reprojection, compressed GeoTIFF conversion, and footprint cleanup.
- **Tiling and overviews** Inner tiling and overview generation for fast multi-scale rendering.
- **Auto-publish to Server** New layers publish through CoreSpatial Server and the cache refreshes.

BUILT ON

GeoServer · PostGIS · GDAL



Map Manager: high resolution imagery import via user friendly web UI

AT A GLANCE

INPUTS	high-resolution imagery and elevation · drag-and-drop upload
PROCESSING	reprojection · compression · tiling · overviews · footprints
OUTPUT	OGC layers auto-published and served through CoreSpatial Server

Maps, dashboards, and story maps in the browser

A full-featured geospatial content management interface built on MapStore2, CesiumJS, and OpenLayers, powered entirely by your CoreSpatial services.

- **Author without code** Build interactive maps, dashboards, GeoStories, and reports in the browser.
- **Combine any source** OGC services (WMS/WMTS/WFS), ArcGIS sources, and Cesium 3D Tiles together.
- **Governed and themeable** Role-based access control, custom theming, and usage analytics.
- **Extensible by design** Add capabilities through the React/Redux plugin architecture.

CoreSpatial Portal: a dashboard combining map, chart, and summary widgets.

AT A GLANCE

BUILD	interactive maps · dashboards · GeoStories · reports
CONNECT	OGC (WMS/WMTS/WFS) · ArcGIS · Cesium 3D Tiles
GOVERN	role-based access control · theming · usage analytics

BUILT ON MapStore · CESIUM · OpenLayers