



# General presentation

# Day 1 Basic Geoportal Users Training

- I Introduction to SDI and geOrchestra
  - History
  - Community
  - Overview (components, architecture)
  - Features overview (tools)
- II How to use viewer (mapfishapp)
  - Overview
  - Load data (from metadata or WMS/WMTS)
  - Manage your contexts
  - Styling
  - Querier
  - Export to sViewer

# Day 2 - Advanced Geoportal Users Training

- III Geoserver
  - Push data on the server
  - Publish data
  - Style your data
  - Organise your service (workspaces)
  - Security
  - Optimizations
  - Cache

# Day 3 - Advanced Geoportal Users Training

- IV Geonetwork
  - What is a metadata
  - Introduction to INSPIRE and ISO
  - How to search for metadata and data
  - Edition (Create a template, Fill your metadata, Validation)
  - Administration (Settings, Harvesting, Roles)

# Day 3 - Geoportal Administrators Training

- V geOrchestra administration
  - Admin console
  - Analytics
  - Group, roles and organisations
  - Rights

# Target profiles

- **Basic Geoportal Users**
  - Basic knowledge of GIS is useful but this training should be accessible to anyone with basic computer skills.
  - Public usage
- **Advanced Geoportal Users**
  - For advanced users who will have a publisher role on the Geoportal. Preliminary experience with Geoportal, GIS or database management would be useful.
  - Basic Geoportal Users Training is required.
  - Partners who will contribute
- **Geoportal Administrator**
  - For users who will have an admin role of the Geoportal.
  - Advanced Geoportal Users Training is required.
  - Administrators

**geOrchestra**



# Objectives

- GIS context
- Discover the geOrchestra project and software
- Know the community & the main platforms
- Have an overview of the different modules
- Understand the application architecture



# Spatial Data Infrastructure

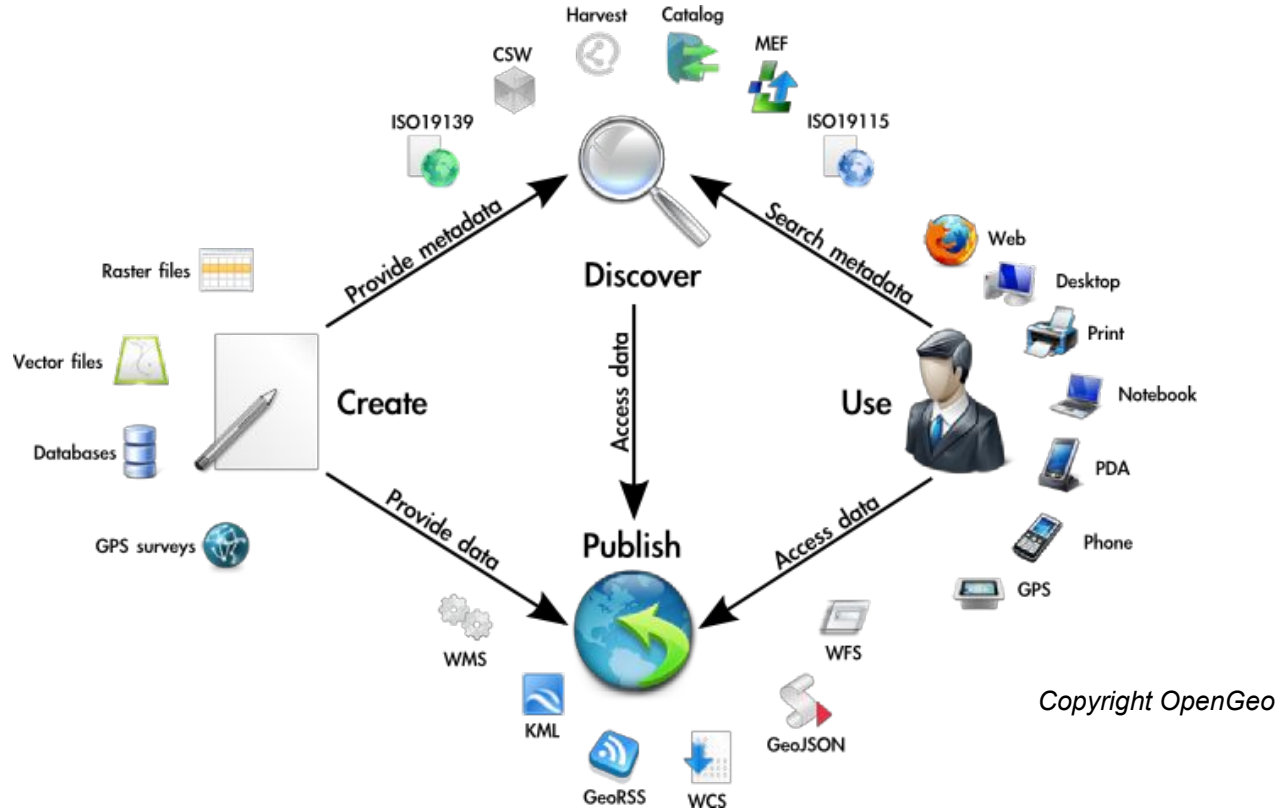
# Definition

Wikipedia

*A **spatial data infrastructure (SDI)** is a [data infrastructure](#) implementing a framework of [geographic data](#), [metadata](#), users and tools that are interactively connected in order to use spatial data in an efficient and flexible way.*

*Another definition is "the technology, policies, standards, [human resources](#), and related activities necessary to acquire, process, distribute, use, maintain, and preserve spatial data"*

# Organization



# Softwares

- ArcGIS Server
- geOrchestra
- Constellation
- GeoNode
- GeoMapfish
- Boundless Geo Suite
- Mapmint
- Handmade
- ....

# Open Source

*Open source starts off with a license that provides royalty free (re)use of software. Next, open source guarantees access to the source code for audit and modification and the ability to redistribute the software with no additional costs.*

- No licence cost
- Mutualisation
- Community

# Open Source & Geospatial

- Community
- Projects
- Support
- Event / Conferences



**geOrchestra**



# geOrchestra

Open Source SDI based on OSGeo components.



# Why geOrchestra

- Open Source !
- Spread
- Fits administrative Region scale
- Strong community
- Mostly OSGeo components

# Historical

2008 - Public order

2009 - Initial realization

2010 - GeoBretagne

2011 - INRA Rennes, Region Aquitaine

2012 - GeoBolivia, CG62

2013 - GeoPicardie, CIGALsace, CRAIG, ArchiSeine, ...

2014 - Rennes-Metropole, Vienna, Puy en Velay, GeoMatagalpa, SIENA, MySwissAlps, INRA Nancy, University of Franche-Comté ...

2015 - ARS, University of Quebec in Rimouski, ...

2016 - PPIGE, 6 European universities, EOST, ...

2017 - GeoRhena, several municipalities in Portugal ...

2018 - GeoGrandEst, Geo2France, Deutsche Telekom, Dreal Corse.

2019 - **Presov** :)

# Current situation

Follow

<https://www.georchestra.org>

Github

<https://github.com/georchestra/georchestra>

Nowadays :

version 18.12 being finalized

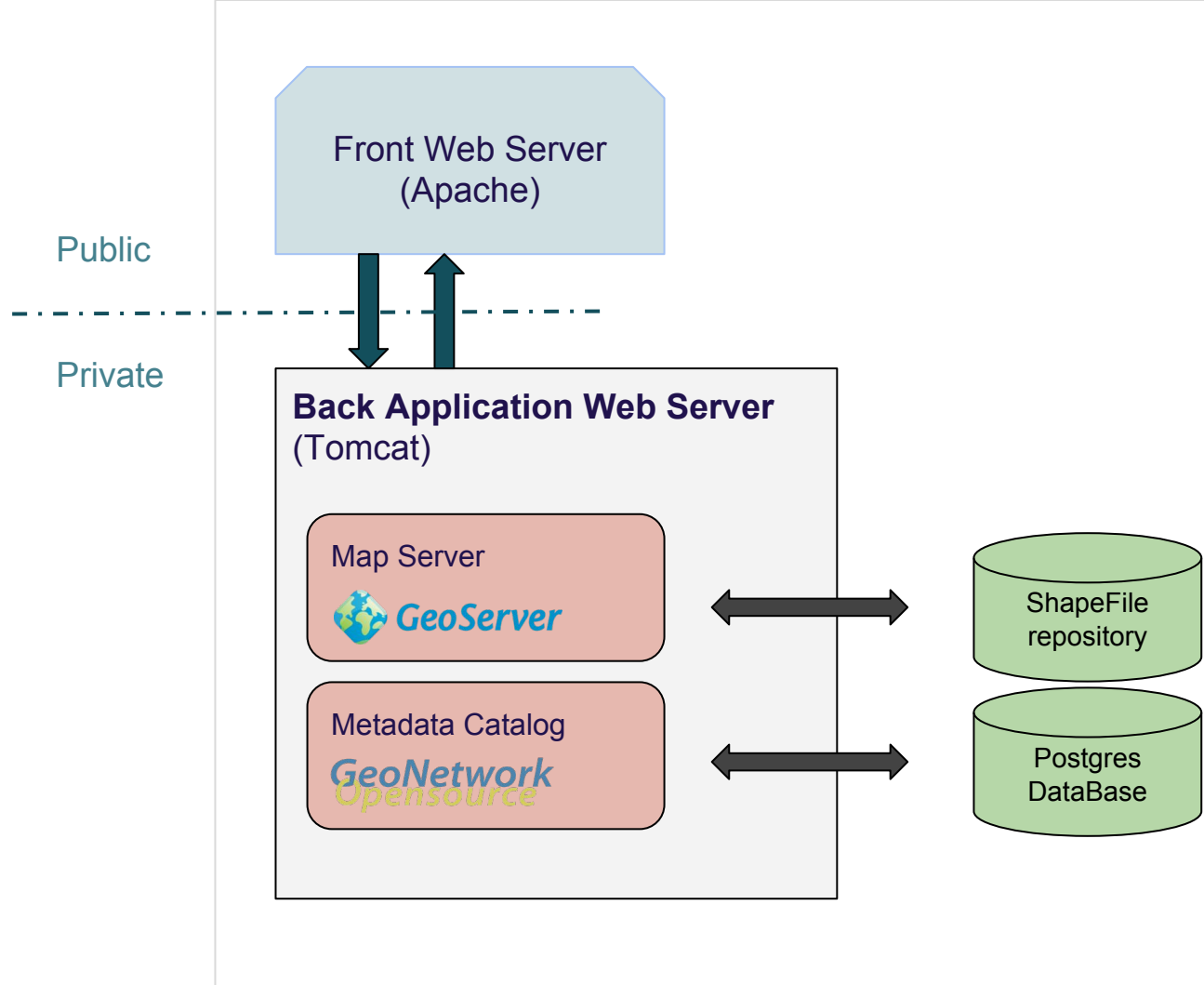
stable version 18.06

versions 16.12 & 17.12 supported

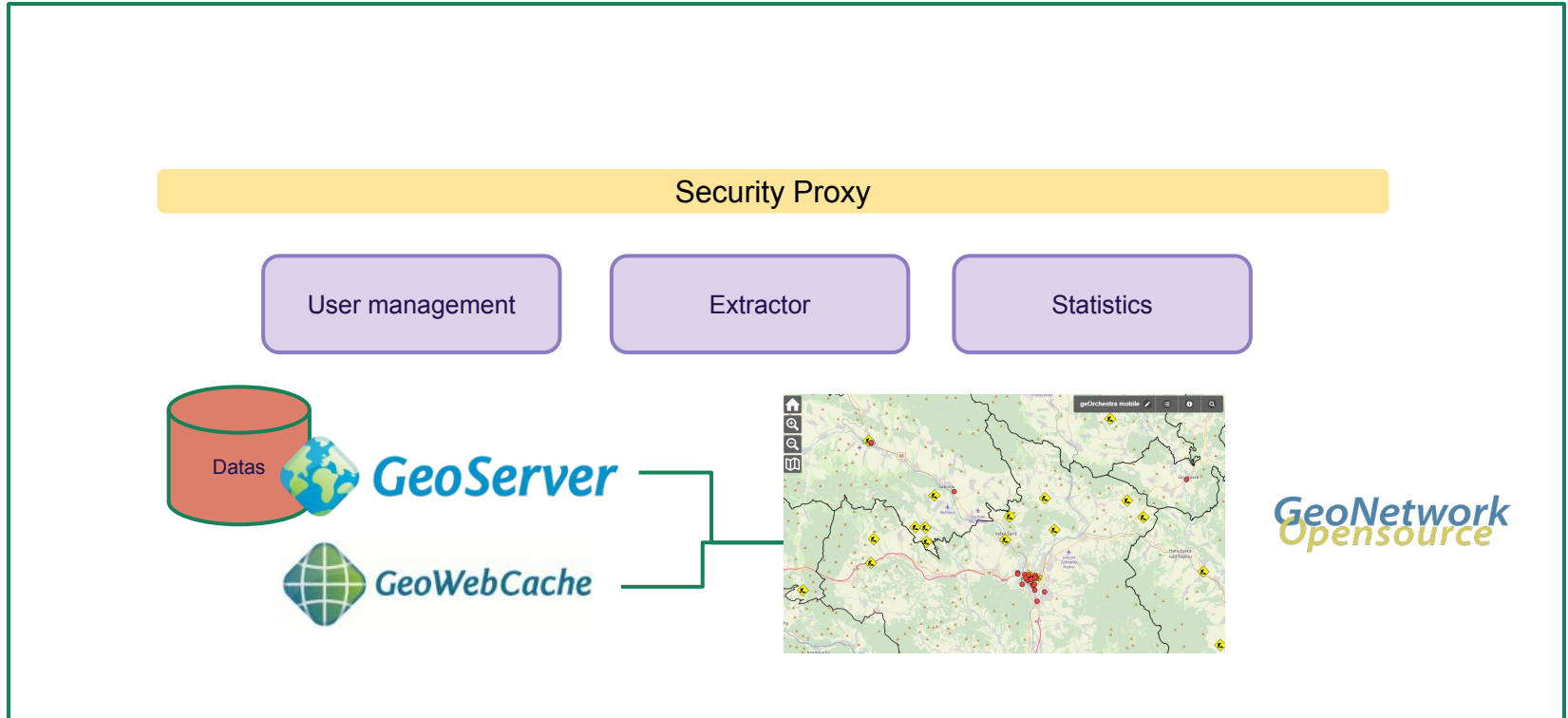
# Modules

- geonetwork: metadata catalog
- mapfishapp: map viewer
- extractorapp: data extraction
- geoserver: map server
- cas: single sign-on (SSO)
- security-proxy: connection between SSO and applications
- analytics: flow consumption analysis
- console: managing users, roles, and organizations
- atlas: optional multipage PDF printing module

SDI  
architecture



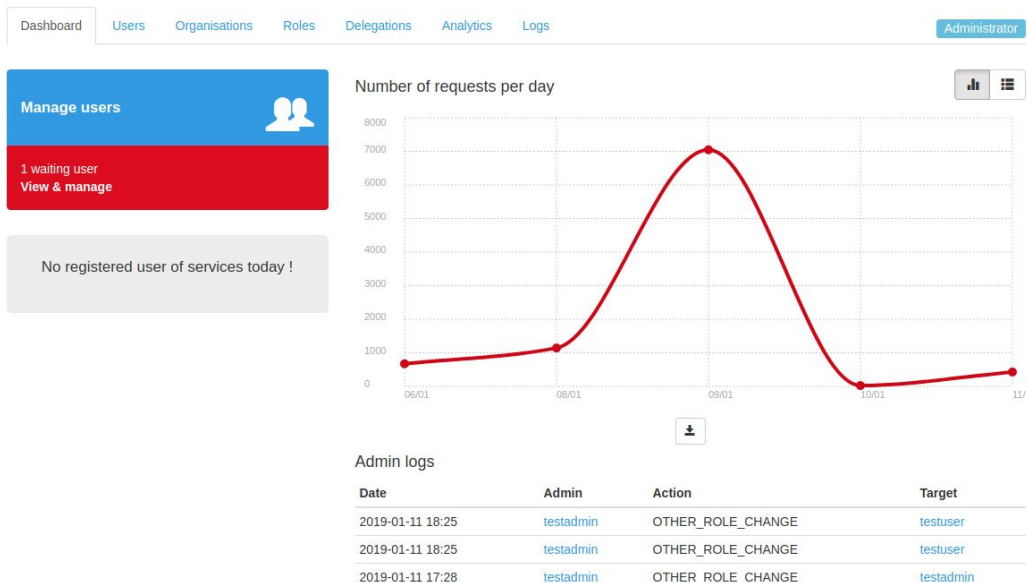
# geOrchestra concept



# User Administration, Roles, Organizations

Centralized administration tools for the SDI.

Now manage user, groups and rights.



# Catalogue - GeoNetwork

Reference all your data through a collaborative tool.

Help people find data

Entry point to access data

The screenshot shows the web interface of the PREŠOVSKÝ SAMOSPRÁVNÝ KRAJ GeoNetwork Catalogue. At the top left is the logo for the Prešovský samosprávny kraj. To its right are navigation links for 'Catalogue', 'Visualiseur', and 'Services'. On the far right, there are language options 'SK | EN | FR' and a 'connexion' link. Below the navigation is a large banner image of a mountain range at sunset. Underneath the banner is a search bar with the placeholder text 'Hľadať ...' and a magnifying glass icon. Below the search bar are two tabs: 'Najnovšie správy' (selected) and 'Najobľúbenejšie'. The main content area displays six data series cards in a 2x3 grid. Each card features a small map icon, a title, a brief description, and a 'series' link. The titles of the series are: 'Baltic Sea - Eutrophicati...', 'Arctic region - Eutrophic...', 'North Sea - Eutrophicati...', 'Mediterranean Sea - Eutr...', 'Black Sea - Eutrophicati...', and 'North East Atlantic Ocea...'. The descriptions for all series are identical: 'EMODnet Chemistry aims to provide access to marine chemistry data sets and derived data products concerning eutrophication, ocean'.



# Viewer - Mapfishapp

Display spatial data and to provide data query and crossover capabilities.

Allow access to layer metadata, and extract relevant data

The screenshot displays the Mapfishapp web interface. At the top, the logo for "PREŠOVSKÝ SAMOSPRÁVNÝ KRAJ" is visible, along with navigation links for "Catalogue", "Viewer", "Services", and "Administration". The main map area shows a geographical view of the region, including towns like Sabinov, Raňkovo, Veľký Šariš, Letecká Záhorská, Prešov, Hanišovoce nad Topľou, and Mirkovce. The map is overlaid with several layers, including yellow diamond-shaped markers and red circular markers. A toolbar on the left provides navigation and zoom controls. On the right side, the "Available layers" panel lists several layers with their respective metadata, including "school\_profiles\_2018", "roads\_reconstruction\_2018", "psk\_terrain\_clip", "PSK\_okres2\_4326", "PSK\_buildings", "barriers\_free\_2018", and "APS\_2018". Each layer entry includes a "source" field and a "source: go.sk.pigeosolutions.fr" link. At the bottom of the interface, the scale is set to 1:272 989, and the coordinates are displayed as Lon = 21.64616, Lat = 49.17073.

# Extracteur - Extractorapp

Extraction of spatial data, via consumption of standard OGC flows.

The screenshot displays the geOrchestra Extracteur web application interface. At the top, there is a navigation bar with the geOrchestra logo and links for 'catalogue', 'viewer', 'extractor' (highlighted in a purple box), and 'services'. On the right side of the navigation bar, there are links for 'pmauduit' and 'logout'.

The main interface is divided into several sections:

- Extractor Configuration Panel:** Located on the left, it contains instructions: 'Configure the general parameters for your extraction using the panel on the right (deployed with Parameters by default). You will then be able to launch the extraction with a click on the button called Extract the selected layers. If you want to precise specific extraction parameters for one layer, select it in the tree above.' Below the instructions is a tree view under 'Your extraction cart' with sub-sections for 'Default parameters', 'OGC Layers', 'OGC services', and 'Example layers'. The 'OGC services' section is currently expanded, showing a 'Loading...' status.
- Extraction Parameters Panel:** Located on the right, it is titled 'Extraction parameters applied by default to all cart layers'. It includes:
  - Output projection:** A dropdown menu set to 'EPSG:4326 - WGS84'.
  - Raster resolution (m/pixel):** A dropdown menu set to '10'.
  - Bounding box (in degrees, SRS = EPSG:4326):** A form with input fields for longitude (-180, 180) and latitude (90, -90), and a 'Modify the bounding box' button.
  - Raster output format:** A dropdown menu set to 'GeoTiff'.
  - Vector output format:** A dropdown menu set to 'Shapefile'.
- Map View:** A central map showing a world map with a large orange rectangular bounding box overlaid on the Pacific Ocean region. A blue text label in the center of the box reads '511267850 km²'. The map includes navigation controls (compass, zoom, pan) on the left side.
- Footer:** At the bottom, there is a scale bar for '5000 km', a status bar with the text 'Extract the selected layers', and a coordinate display 'EPSG:4326: 241.27002 / 92.05950 1 : 245 195 513'.

# Data server - GeoServer

Distribute vector and raster data in a standardized way (OGC), by erasing the specificities related to their native formats.

The screenshot displays the geOrchestra interface for GeoServer. The top navigation bar includes 'catalogue', 'viewer', 'extractor', and 'services' (highlighted in purple). A user profile 'pmauduit' and a 'logout' button are visible in the top right.

The main content area is titled 'Welcome' and contains the following information:

- Welcome**  
This GeoServer belongs to geOrchestra.
- Data Summary:**
  - 36 Layers (Add layers)
  - 12 Stores (Add stores)
  - 12 Workspaces (Create workspaces)
- Warning:** No strong cryptography available, installation of the unrestricted policy jar files is recommended.
- Version:** This GeoServer instance is running version 2.5.1. For more information please contact the administrator.

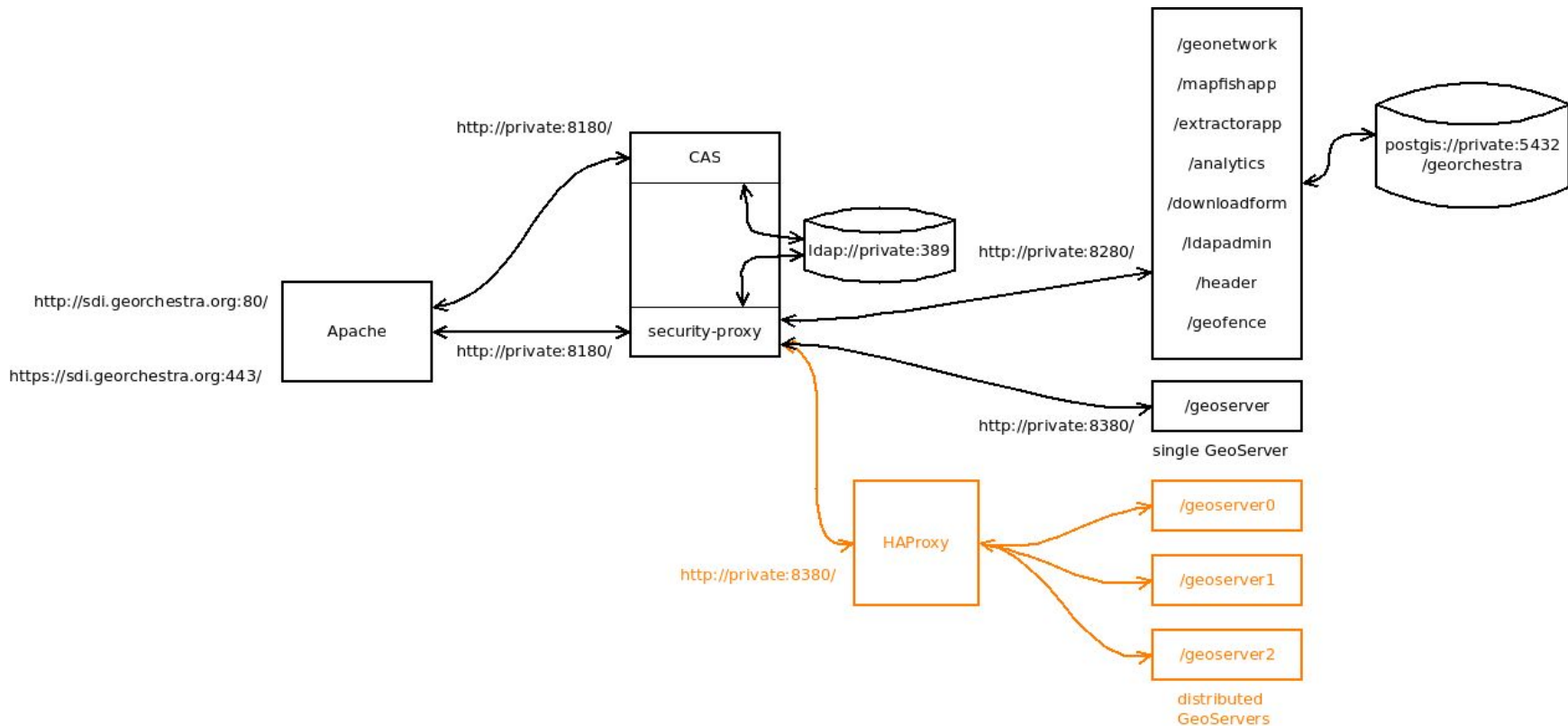
The left sidebar contains a navigation menu with the following sections:

- About & Status:** Server Status, GeoServer Logs, Contact Information, About GeoServer
- Data:** Layer Preview, Workspaces, Stores, Layers, Layer Groups, Styles
- Services:** W3DS, CSW, WCS, WFS, WMS, WPS
- Settings:** Global, JAI, Coverage Access
- Tile Caching:** Tile Layers, Caching Defaults, Gridsets

The right sidebar displays **Service Capabilities** with the following list:

- CSW: 2.0.2
- W3DS: 0.4.0
- WCS: 1.0.0, 1.1.0, 1.1.1, 1.1, 2.0.1
- WFS: 1.0.0, 1.1.0, 2.0.0
- WMS: 1.1.1, 1.3.0
- WPS: 1.0.0
- TMS: 1.0.0
- WMS-C: 1.1.1
- WMTS: 1.0.0

# Architecture



# Roadmap - First Semester 2019

- Platform customisation
  - Configuration
  - Look and feel
  - Translation
- Data collection
- Data Integration
- Infrastructure
  - Backup
  - Monitoring
  - Upload
- Organization

To be continued...

