

# ArcGIS Online

## Overview

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- UFZ has access to the most useful ArcGIS-tools and –services
- Reachable via <https://ufz.maps.arcgis.com/home/index.html> but needs an account
- UFZ is limited to an intransparent credit system of ESRI, concerning user accounts and data storage
- Some basic web-GIS Apps have already been created and are running, mainly for remote sensing, for example  
<https://ufz.maps.arcgis.com/apps/webappviewer/index.html?id=897531ee585c4a2683f35f98e2861a41>

# UFZ SDI / spatial.io

## Zenodo



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Software Open

### spatial.IO - An integrated cloud-ready geospatial management system

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- Zenodo → <https://zenodo.org/doi/10.5281/zenodo.10391523>
- GitLab → <https://codebase.helmholtz.cloud/ufz-sdi/spatialio>
- Documentation → <https://rdm.pages.ufz.de/guidelines/practice-ufz/sdi/>

182  
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11  
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### A Spatial Data Infrastructure for netCDF files and more

A Spatial Data Infrastructure (SDI) is a combination of policies, standards and software to manage and deliver geospatial data (Simmons, 2018). A good SDI follows policies and standards that are (widely) accepted in the communities (e.g. FAIR, OGC). Although often providing new functionality, the main advantage of an SDI is the connection of different tools and software products to build (mostly) automated workflows. This allows for less manual processing (and therefore fewer errors) as well as standardized data products due to fixed workflows. For this to work flawlessly, extensive documentation and user instructions are key. An SDI can contain (but is not limited to) data storage, metadata catalogue, tools for data processing, WebGIS and a form of data access (e.g. download, web service).

Climate modelling and research increasingly produce and share the data standard of netCDF files, leading to an increasing demand in automated management of netCDF data. This application aims to provide automated workflows to process standardized netCDF data and display them in an interactive WebGIS. The standard specifications follow

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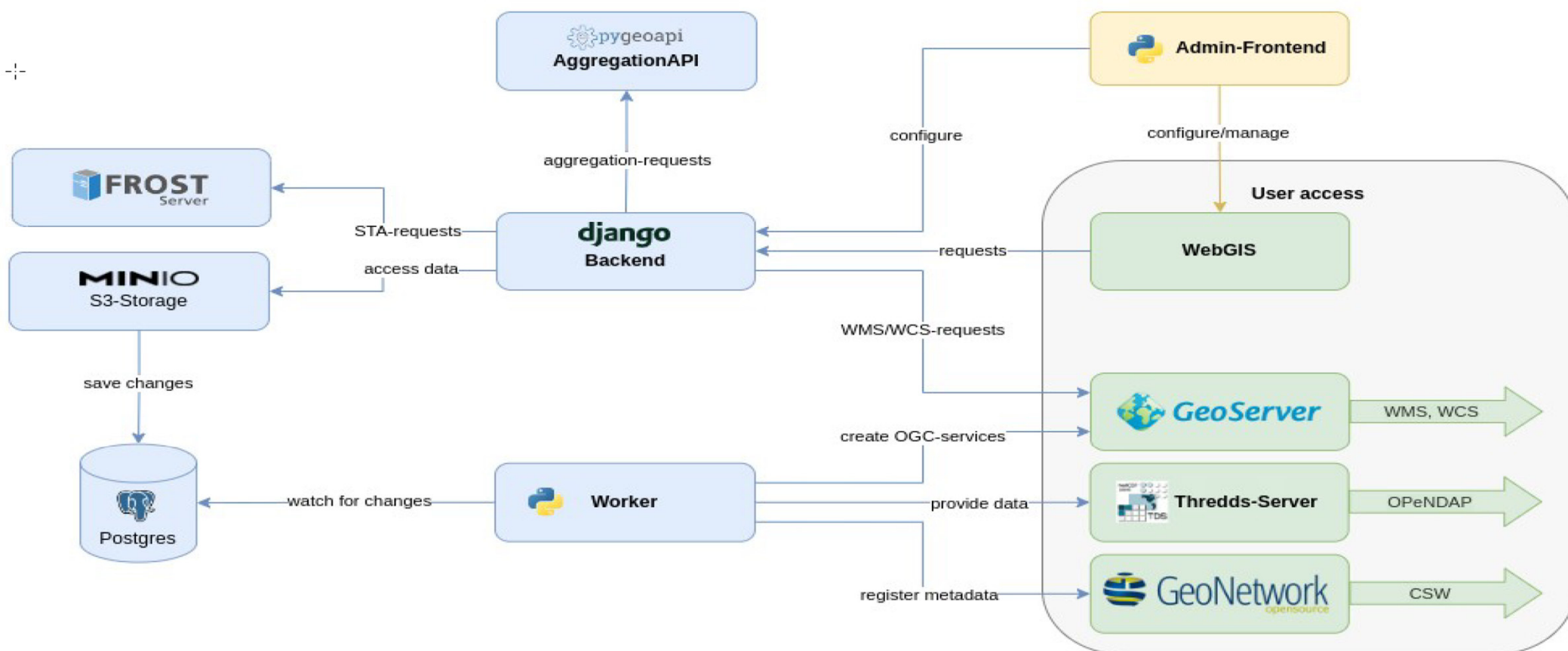
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Picture caption

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# UFZ SDI

## Features

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- S3 cloud-storage with MinIO
- FROST-Server to store and access sensor data
- Creation of custom interactive WebGIS components for netCDF, STA and GeoTIFF data
- Extendable processes to get spatially aggregated values for netCDF and GeoTIFF data
- Use of django framework to make configuration of data and WebGIS user-friendly
- Workflow for automated creation of OGC web services with GeoServer of new netCDF data
- Workflow for automated creation of metadata entries in GeoNetwork
- THREDDS Data Server (TDS) to provide netCDF data with OPeNDAP
- WebGIS -> <https://web.app.ufz.de/gdi/>