QGIS2Mapbender QGIS Plugin

Publish your QGIS Project directly in Mapbender

Astrid Emde WhereGroup | FOSS4G Europe 2025 | Mostar | Bosnia-Herzegovina

Slides https://github.com/astroidex/presentations/tree/master/FOSS4G-Europe-2025

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OSGeoLive PSC
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Bonn

WhereGroup

- 50 employees - developers, consultants & geospatial experts
- Working with & supporting Open Source Geospatial Software for more than 15 years
- Berlin | Bonn | Freiburg | Hamburg
- FOSSGIS e.V. member & OSGeo sponsor
- Company behind Mapbender & MapComponents
- Training Institute FOSS Academy

QGIS2Mapbender

QGIS-Project

Create your QGIS project

Transfer via QGIS2Mapbender

via Mapbender API

QGIS Server WMS

QGIS-Project & Data ready to use as QGIS Server Service

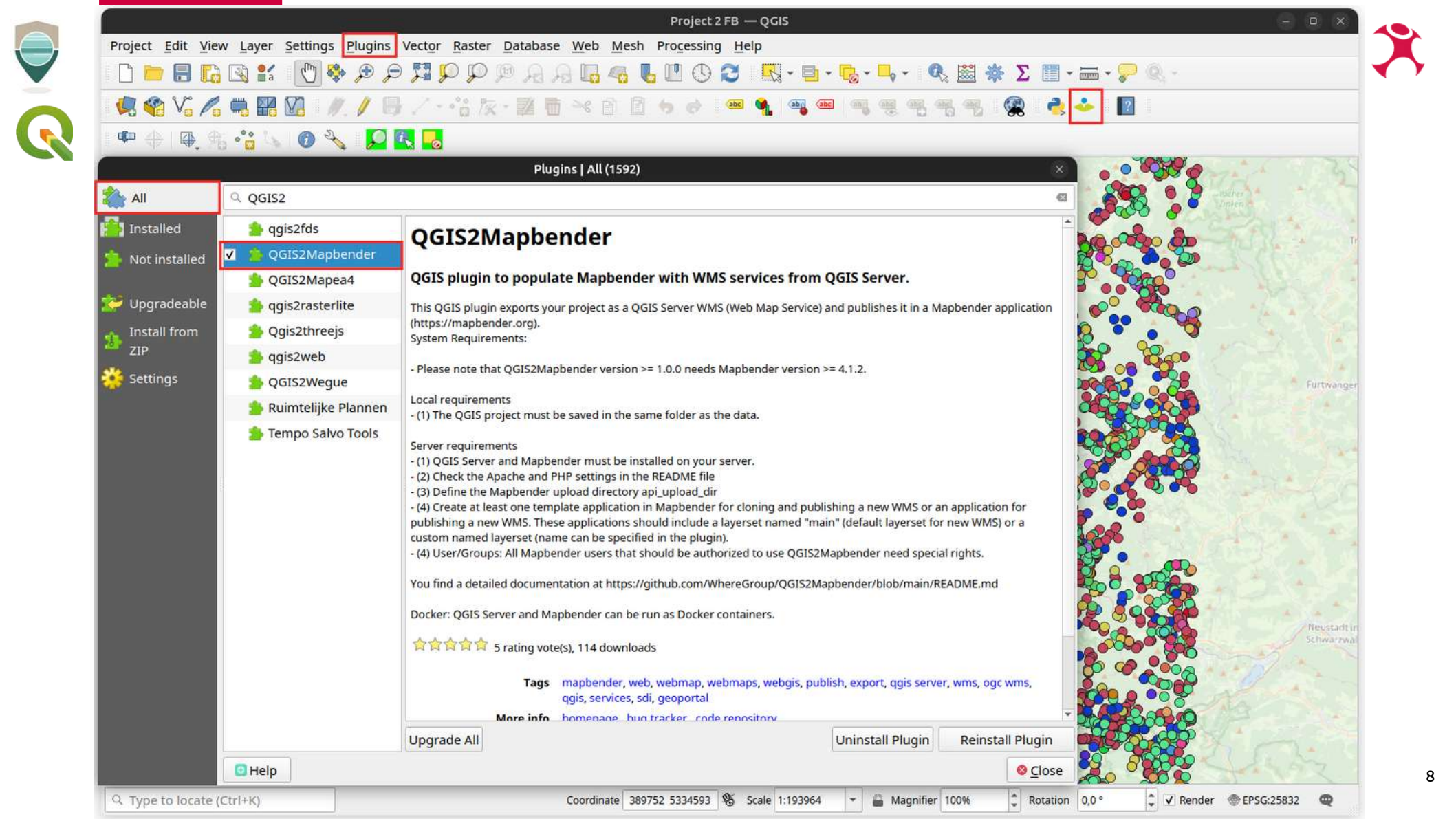
Publish / Update in Mapbender

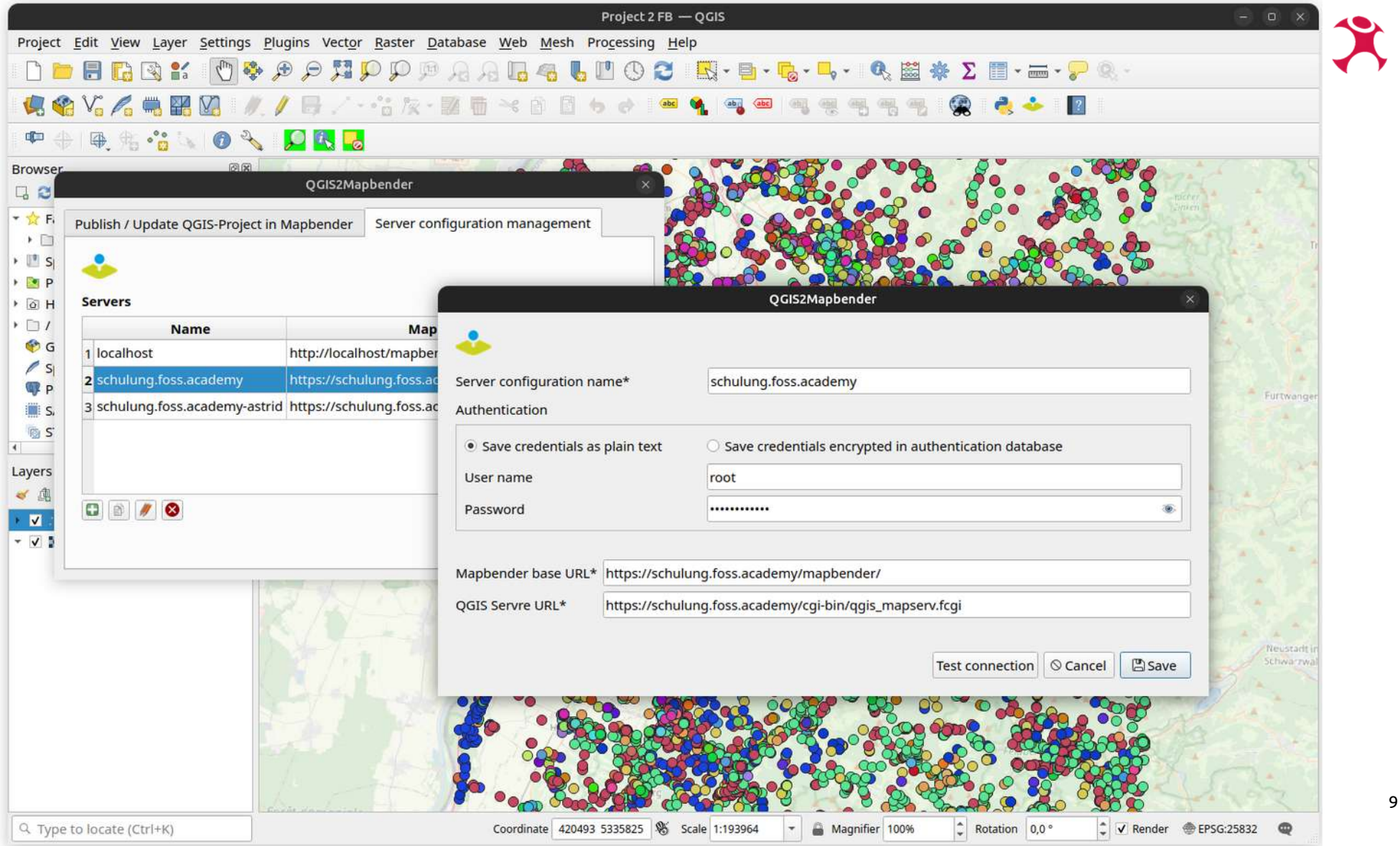
Use the WMS in Mapbender

Assign WMS to an application & layerset

QGIS2Mapbender Requirements

- Needs Mapbender Version 4.1.3
- Plugin needs link to QGIS Server and Mapbender
- Needs Mapbender user with sufficiant rights
- Plugin needs additional configuration for Mapbender and Apache
- QGIS Server needs access to the Mapbender upload directory
- https://github.com/WhereGroup/QGIS2Mapbender/blob/main/README.md
- https://plugins.qgis.org/plugins/qgis2mapbender/


Project 2 FB — QGIS
Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help
Plugins | All (1592)
All
Installed
Not installed
Upgradeable
Install from ZIP
Settings
QGIS2
qgis2fds
QGIS2Mapbender
QGIS2Mapea4
qgis2rasterlite
Qgis2threejs
qgis2web
QGIS2Wegue
Ruimtelijke Plannen
Tempo Salvo Tools
QGIS2Mapbender
QGIS plugin to populate Mapbender with WMS services from QGIS Server.
This QGIS plugin exports your project as a QGIS Server WMS (Web Map Service) and publishes it in a Mapbender application (https://mapbender.org).
System Requirements:
- Please note that QGIS2Mapbender version >= 1.0.0 needs Mapbender version >= 4.1.2.
Local requirements
- (1) The QGIS project must be saved in the same folder as the data.
Server requirements
- (1) QGIS Server and Mapbender must be installed on your server.
- (2) Check the Apache and PHP settings in the README file
- (3) Define the Mapbender upload directory api_upload_dir
- (4) Create at least one template application in Mapbender for cloning and publishing a new WMS or an application for publishing a new WMS. These applications should include a layerset named "main" (default layerset for new WMS) or a custom named layerset (name can be specified in the plugin).
- (4) User/Groups: All Mapbender users that should be authorized to use QGIS2Mapbender need special rights.
You find a detailed documentation at https://github.com/WhereGroup/QGIS2Mapbender/blob/main/README.md
Docker: QGIS Server and Mapbender can be run as Docker containers.
5 rating vote(s), 114 downloads
Tags mapbender, web, webmap, webmaps, webgis, publish, export, qgis server, wms, ogc wms, qgis, services, sdi, geoportal
More info homepage, bug tracker, code repository
Upgrade All
Uninstall Plugin
Reinstall Plugin
Help
Close
Type to locate (Ctrl+K)
Coordinate 389752 5334593
Scale 1:193964
Magnifier 100%
Rotation 0,0 °
Render
EPSG:25832


Project 2 FB — QGIS
Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help
Browser
Layers
QGIS2Mapbender
Publish / Update QGIS-Project in Mapbender
Server configuration management
Servers
Name
1 localhost
2 schulung.foss.academy
3 schulung.foss.academy-astrid
QGIS2Mapbender
Server configuration name* schulung.foss.academy
Authentication
Save credentials as plain text
Save credentials encrypted in authentication database
User name root
Password
Mapbender base URL* https://schulung.foss.academy/mapbender/
QGIS Servre URL* https://schulung.foss.academy/cgi-bin/qgis_mapserv.fcgi
Test connection
Cancel
Save
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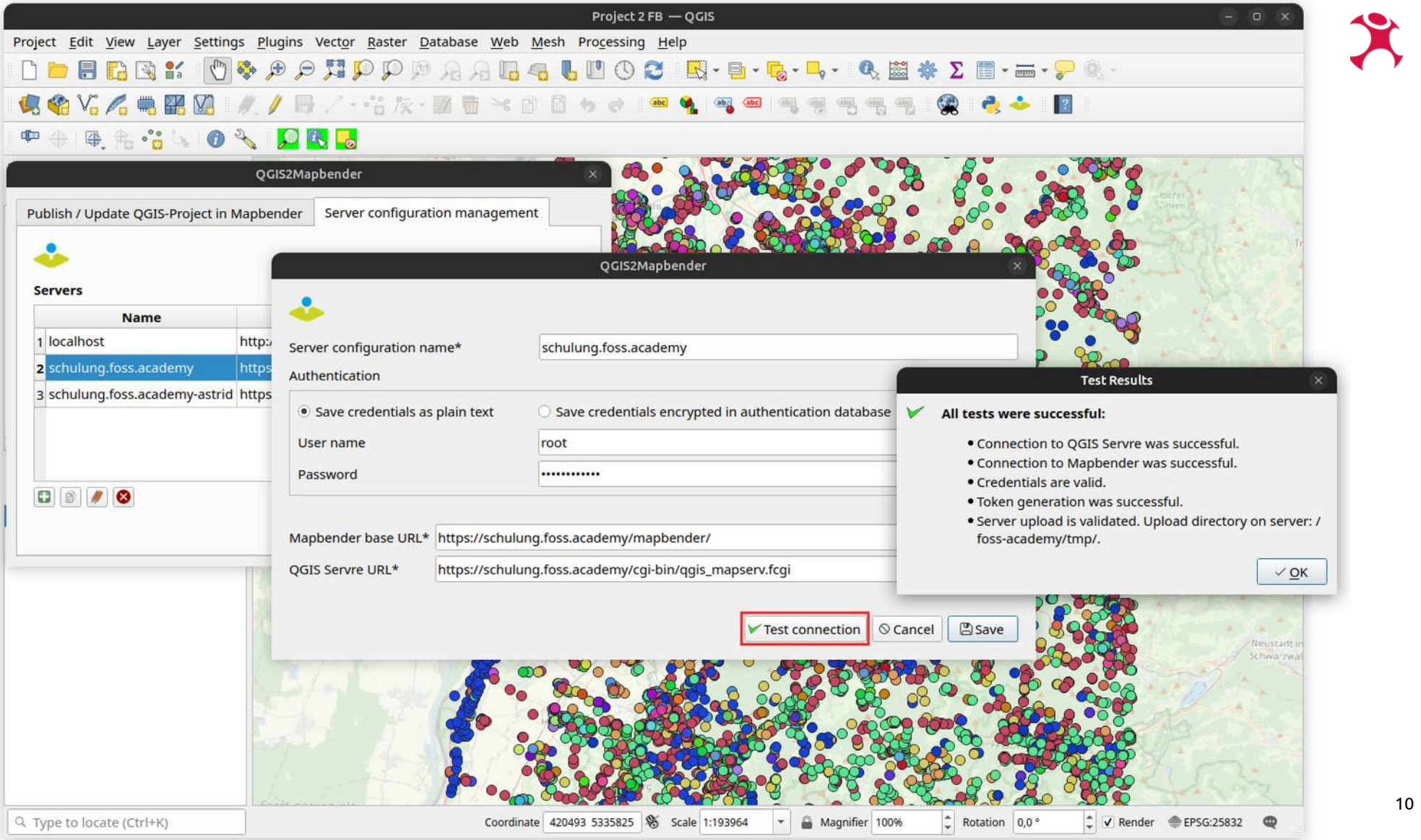
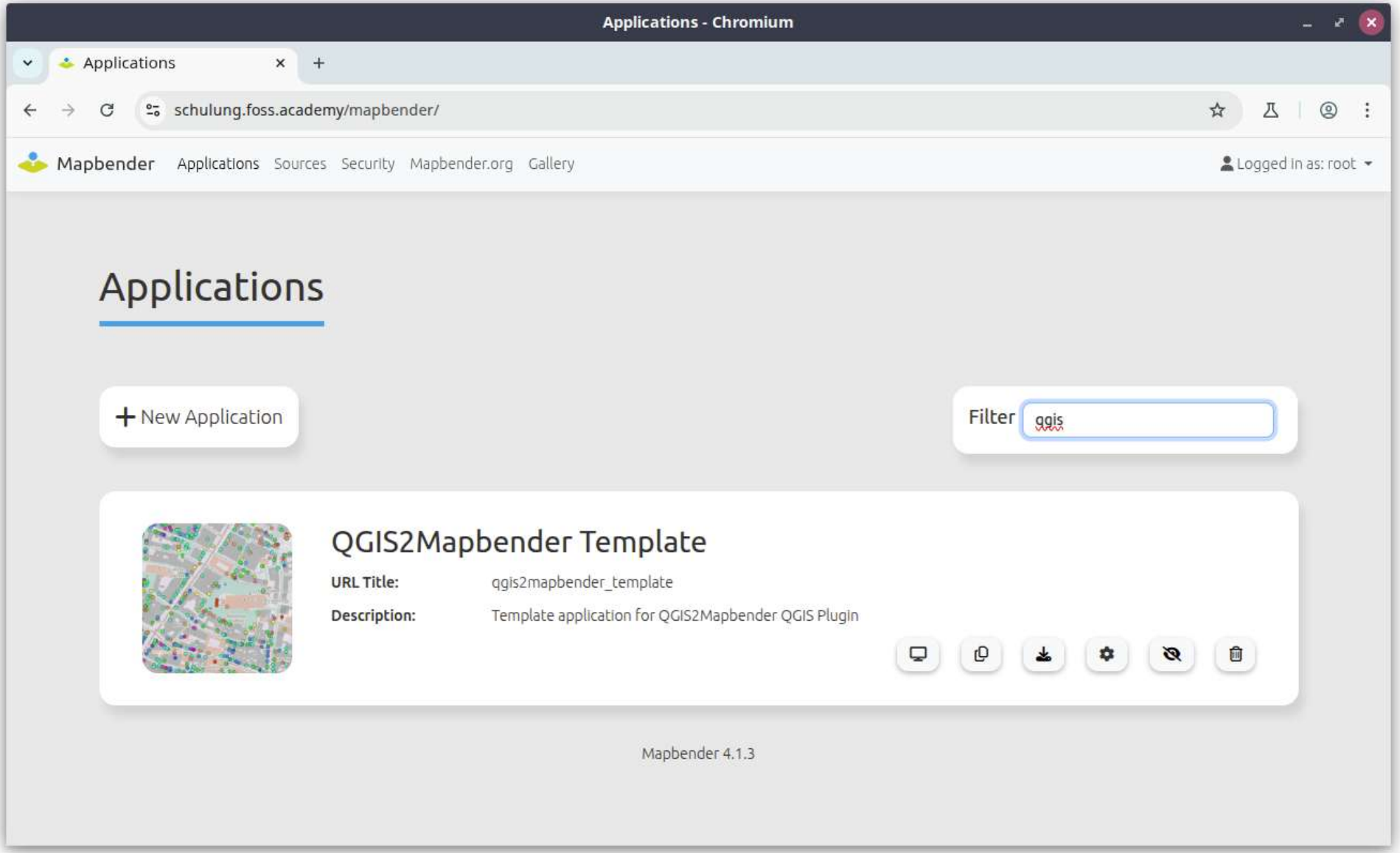
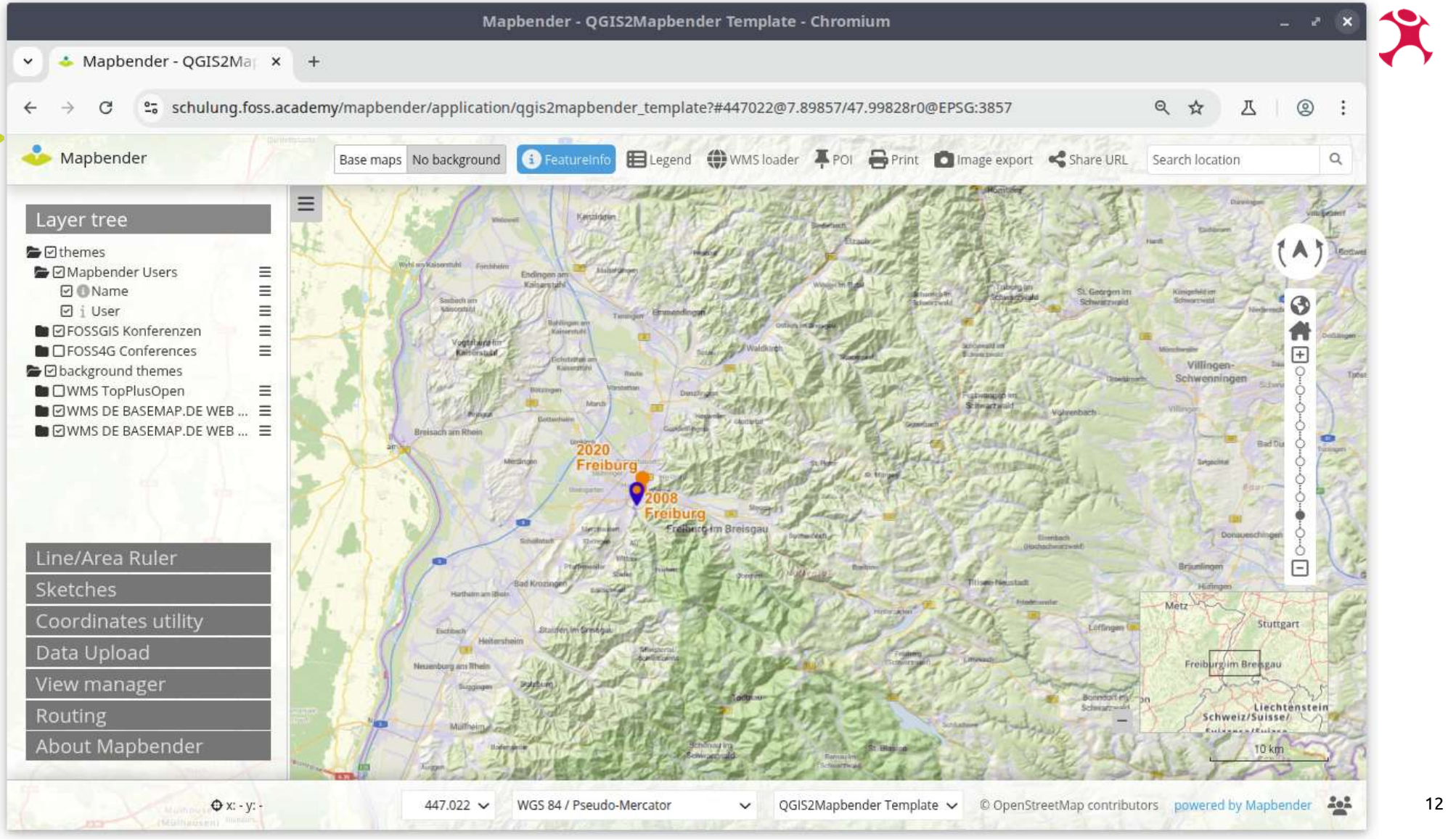
Coordinate 420493 5335825
Scale 1:193964
Magnifier 100%
Rotation 0,0 °
Render
EPSG:25832


Project 2 FB — QGIS
Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help
QGIS2Mapbender
Publish / Update QGIS-Project in Mapbender
Server configuration management
Servers
Name
1 localhost
2 schulung.foss.academy
3 schulung.foss.academy-astrid
QGIS2Mapbender
Server configuration name*
schulung.foss.academy
Authentication
Save credentials as plain text
Save credentials encrypted in authentication database
User name
root
Password
Mapbender base URL*
https://schulung.foss.academy/mapbender/
QGIS Servre URL*
https://schulung.foss.academy/cgi-bin/qgis_mapserv.fcgi
Test connection
Cancel
Save
Test Results
All tests were successful:
• Connection to QGIS Servre was successful.
• Connection to Mapbender was successful.
• Credentials are valid.
• Token generation was successful.
• Server upload is validated. Upload directory on server: / foss-academy/tmp/.
OK
Type to locate (Ctrl+K)
Coordinate 420493 5335825
Scale 1:193964
Magnifier 100%
Rotation 0,0 °
Render
EPSG:25832


Applications - Chromium
Applications
schulung.foss.academy/mapbender/
Mapbender
Applications
Sources
Security
Mapbender.org
Gallery
Logged in as: root
Applications
New Application
Filter
qgis
QGIS2Mapbender Template
URL Title:
qgis2mapbender_template
Description:
Template application for QGIS2Mapbender QGIS Plugin
Mapbender 4.1.3


Mapbender - QGIS2Mapbender Template - Chromium
Mapbender - QGIS2Ma
schulung.foss.academy/mapbender/application/qgis2mapbender_template?#447022@7.89857/47.99828r0@EPSG:3857
Mapbender
Base maps
No background
FeatureInfo
Legend
WMS loader
POI
Print
Image export
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Mapbender Users
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FOSS4G Conferences
background themes
WMS TopPlusOpen
WMS DE BASEMAP.DE WEB ...
WMS DE BASEMAP.DE WEB ...
Line/Area Ruler
Sketches
Coordinates utility
Data Upload
View manager
Routing
About Mapbender
2020 Freiburg
2008 Freiburg
Freiburg im Breisgau
Villingen-Schwenningen
Metz
Stuttgart
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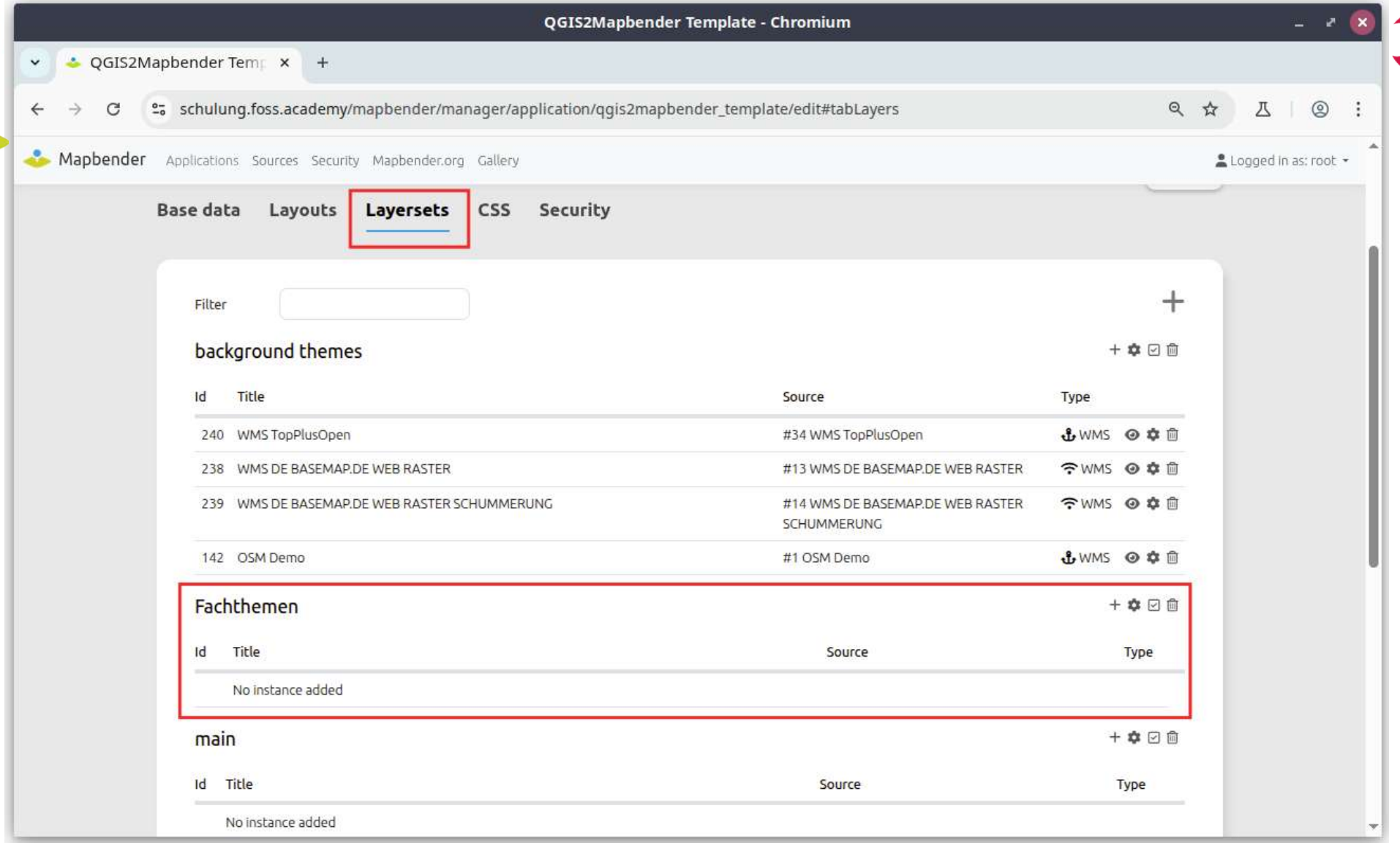
WGS 84 / Pseudo-Mercator
QGIS2Mapbender Template
© OpenStreetMap contributors
powered by Mapbender


QGIS2Mapbender Template - Chromium
QGIS2Mapbender Temp
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Mapbender
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Gallery
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#34 WMS TopPlusOpen
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#13 WMS DE BASEMAP.DE WEB RASTER
WMS
239
WMS DE BASEMAP.DE WEB RASTER SCHUMMERUNG
#14 WMS DE BASEMAP.DE WEB RASTER SCHUMMERUNG
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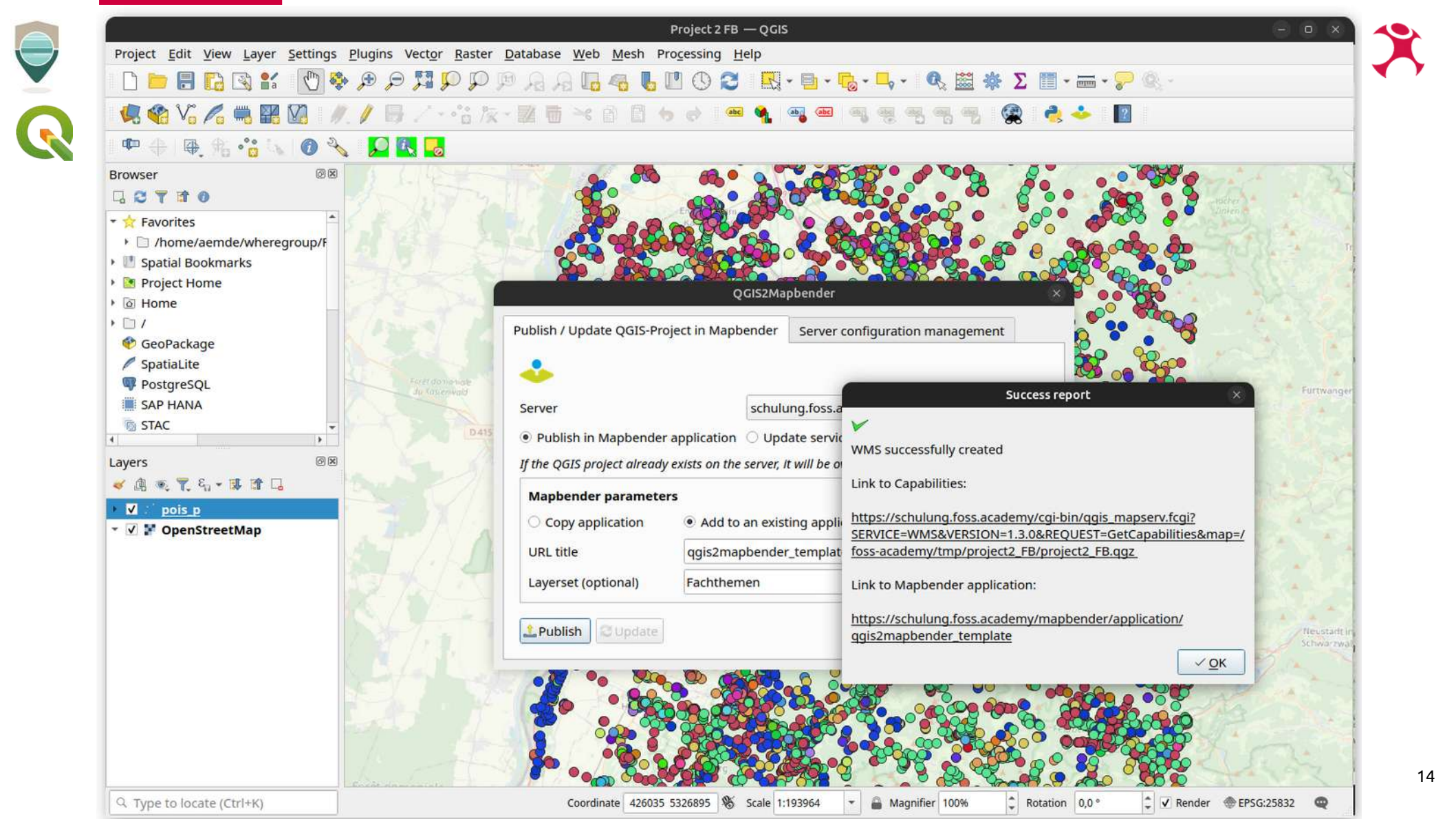
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Success report
WMS successfully created
Link to Capabilities:
https://schulung.foss.academy/cgi-bin/qgis_mapserv.fcgi?SERVICE=WMS&VERSION=1.3.0&REQUEST=GetCapabilities&map=/foss-academy/tmp/project2_FB/project2_FB.qgz
Link to Mapbender application:
https://schulung.foss.academy/mapbender/application/qgis2mapbender_template
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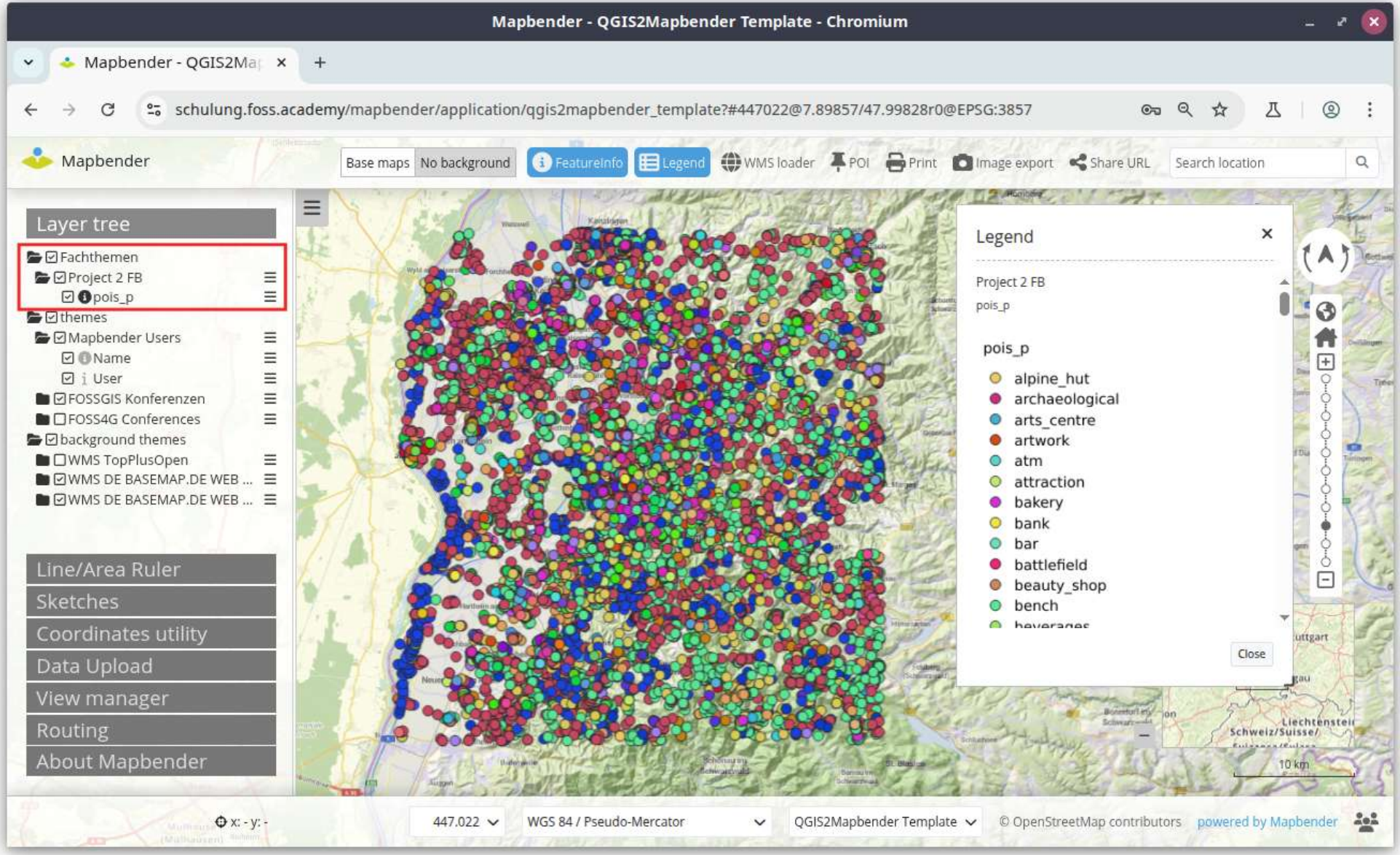
Rotation 0,0 °
Render
EPSG:25832


Mapbender - QGIS2Mapbender Template - Chromium
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Mapbender
Base maps
No background
FeatureInfo
Legend
WMS loader
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Line/Area Ruler
Sketches
Coordinates utility
Data Upload
View manager
Routing
About Mapbender
Legend
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arts_centre
artwork
atm
attraction
bakery
bank
bar
battlefield
beauty_shop
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Close
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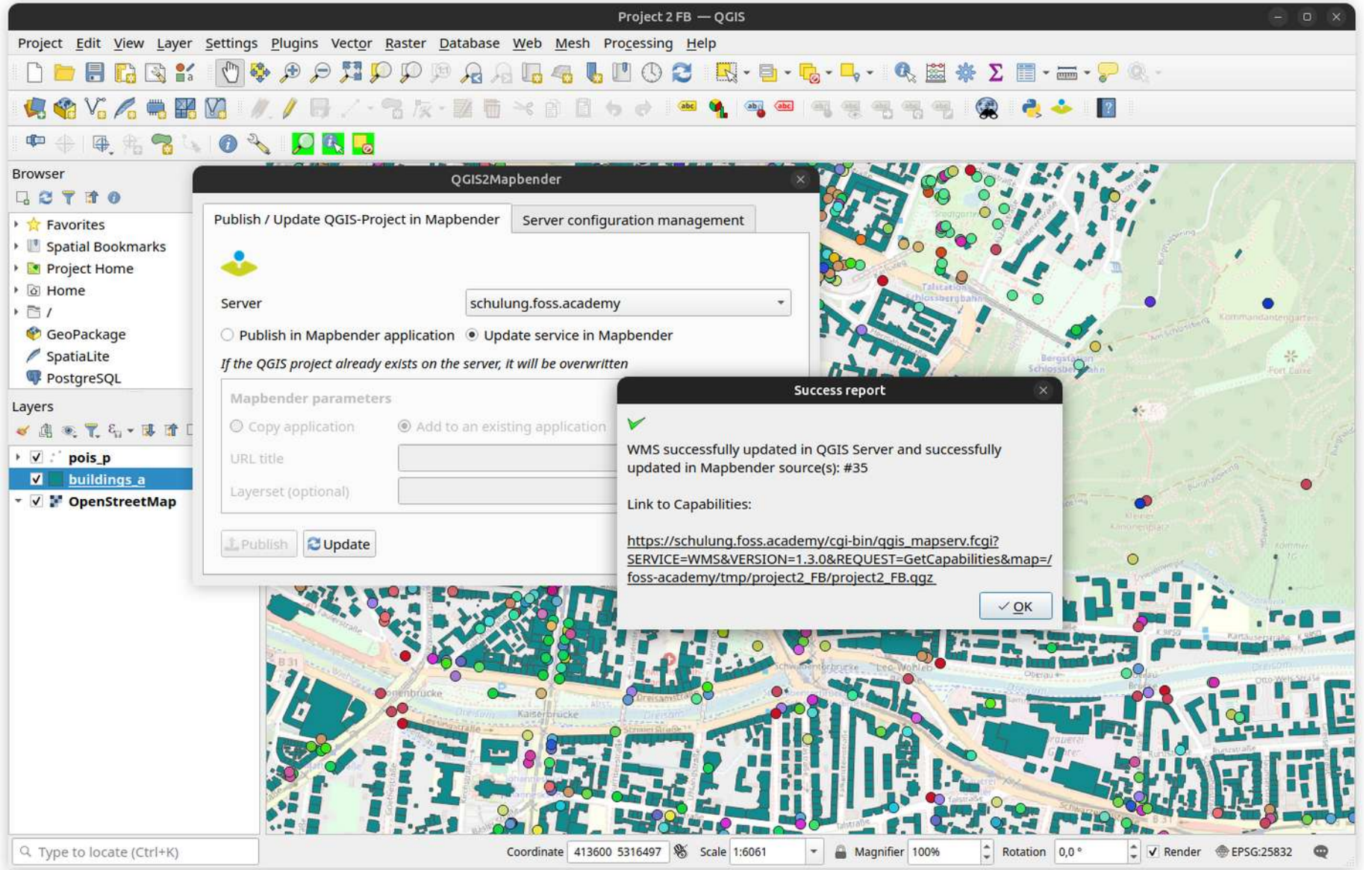
WGS 84 / Pseudo-Mercator
QGIS2Mapbender Template
© OpenStreetMap contributors
powered by Mapbender


Project 2 FB — QGIS
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Browser
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PostgreSQL
Layers
pois_p
buildings_a
OpenStreetMap
QGIS2Mapbender
Publish / Update QGIS-Project in Mapbender
Server configuration management
Server
schulung.foss.academy
Publish in Mapbender application
Update service in Mapbender
If the QGIS project already exists on the server, it will be overwritten
Mapbender parameters
Copy application
Add to an existing application
URL title
Layerset (optional)
Publish
Update
Success report
WMS successfully updated in QGIS Server and successfully updated in Mapbender source(s): #35
Link to Capabilities:
https://schulung.foss.academy/cgi-bin/qgis_mapserv.fcgi?SERVICE=WMS&VERSION=1.3.0&REQUEST=GetCapabilities&map=/foss-academy/tmp/project2_FB/project2_FB.qgz
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Magnifier 100%
Rotation 0,0 °
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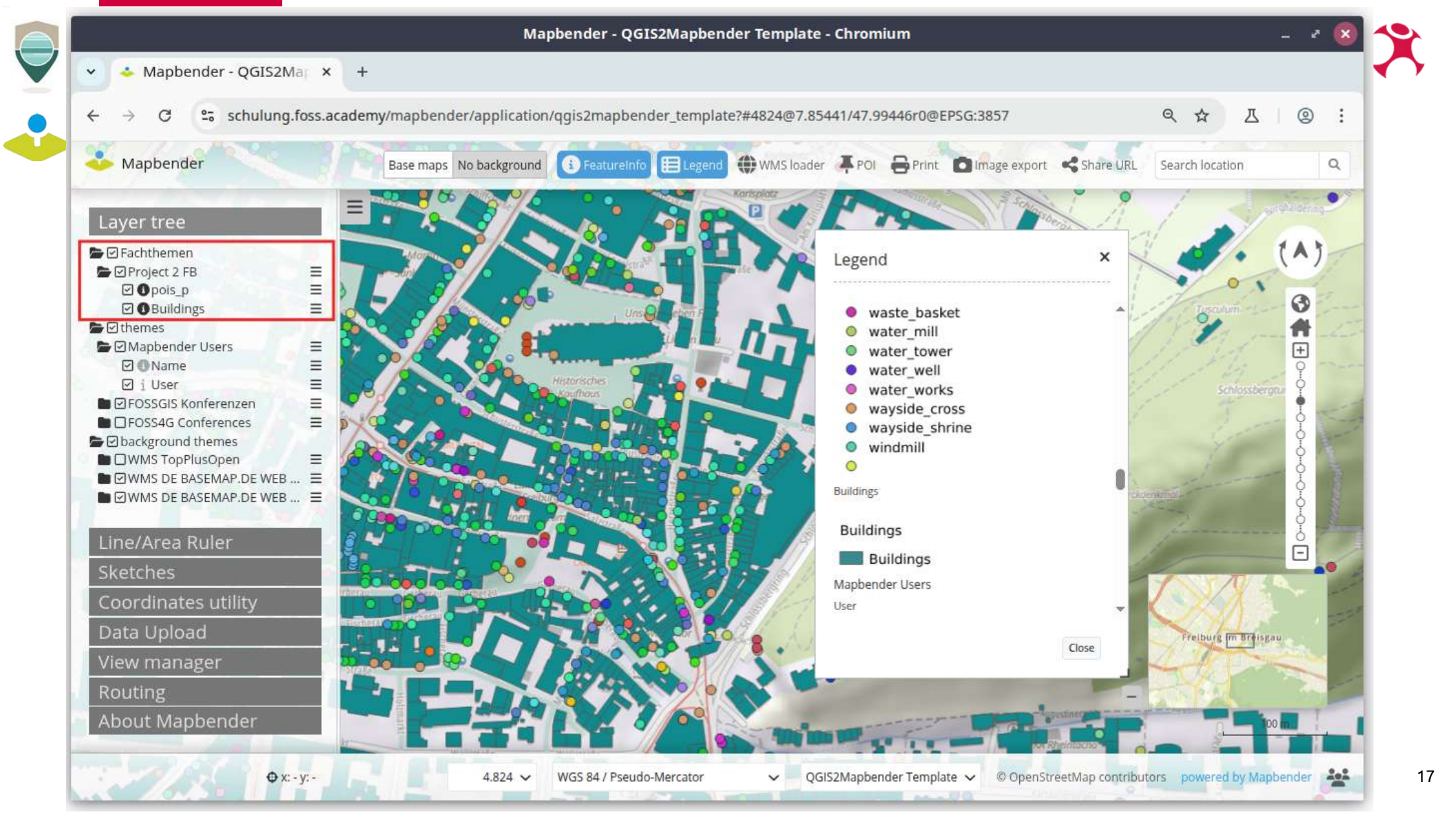
EPSG:25832


Mapbender - QGIS2Mapbender Template - Chromium
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Mapbender
Base maps
No background
FeatureInfo
Legend
WMS loader
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Image export
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Mapbender Users
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FOSS4G Conferences
background themes
WMS TopPlusOpen
WMS DE BASEMAP.DE WEB ...
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Line/Area Ruler
Sketches
Coordinates utility
Data Upload
View manager
Routing
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waste_basket
water_mill
water_tower
water_well
water_works
wayside_cross
wayside_shrine
windmill
Buildings
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WGS 84 / Pseudo-Mercator
QGIS2Mapbender Template
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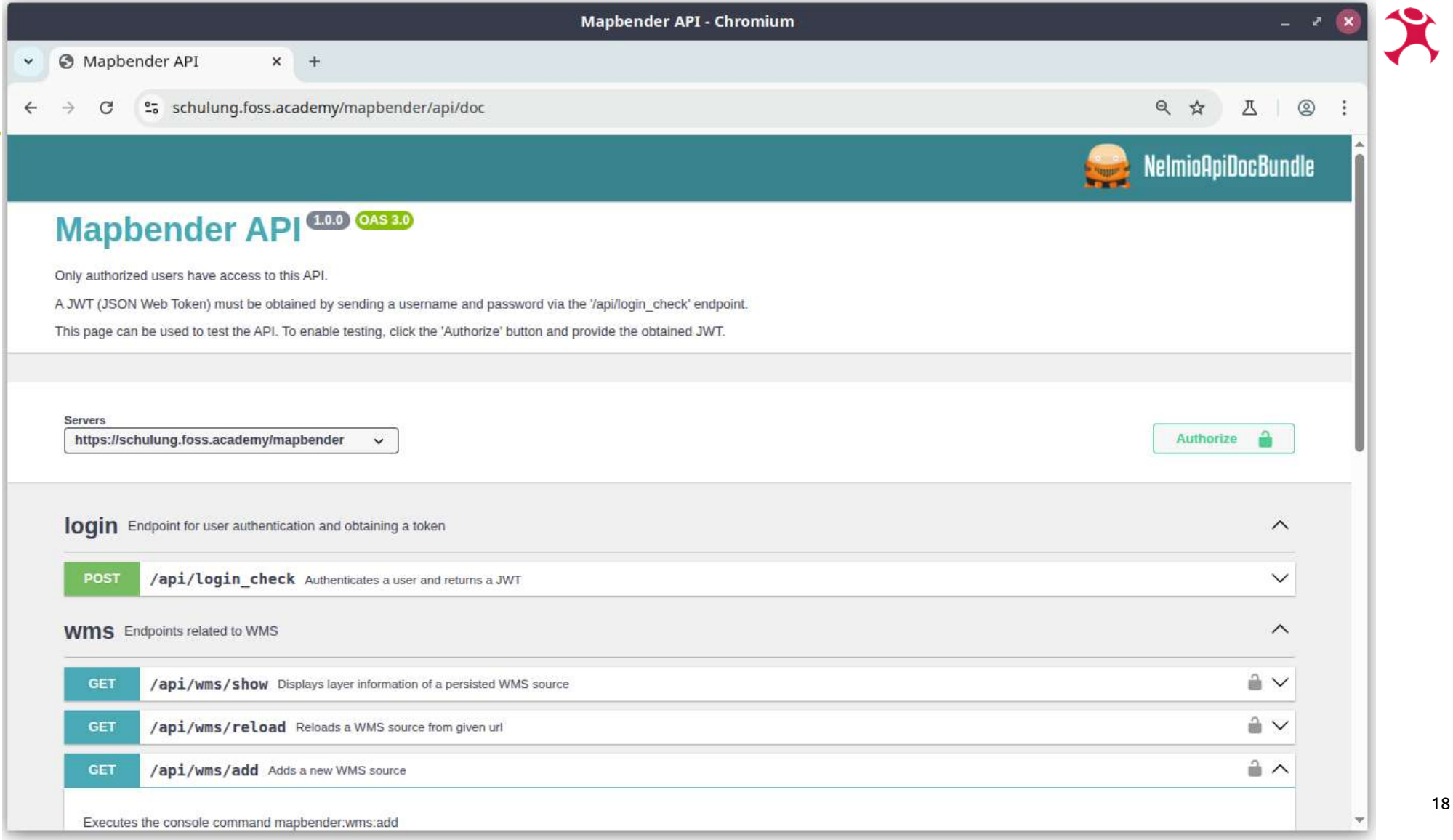
powered by Mapbender


Mapbender API - Chromium
Mapbender API
schulung.foss.academy/mapbender/api/doc
NelmioApiDocBundle
Mapbender API
1.0.0
OAS 3.0
Only authorized users have access to this API.
A JWT (JSON Web Token) must be obtained by sending a username and password via the '/api/login_check' endpoint.
This page can be used to test the API. To enable testing, click the 'Authorize' button and provide the obtained JWT.
Servers
https://schulung.foss.academy/mapbender
Authorize
login
Endpoint for user authentication and obtaining a token
POST
/api/login_check
Authenticates a user and returns a JWT
wms
Endpoints related to WMS
GET
/api/wms/show
Displays layer information of a persisted WMS source
GET
/api/wms/reload
Reloads a WMS source from given url
GET
/api/wms/add
Adds a new WMS source
Executes the console command mapbender:wms:add

QGIS2Mapbender – ideas & next steps

- More options
  - Upload QGIS project without transfer of the data (only upload QGIS file)
  - Upload QGIS project without publishing in Mapbender
- Support for QGIS projects saved in the PostgreSQL database
- I18n – provide support for other languages (already in progress)
- Mapbender options
  - Decide how to handle new layers on update
  - Additional Mapbender settings: activate proxy, convert to Shared Instance

Thanks a lot for your attention

Slides
https://github.com/astroidex/presentations/tree/master/FOSS4G-Europe-2025

Feedback is welcome

Mapbender

Website
https://mapbender.org

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astrid.emde@wheregroup.com

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53119 Bonn