

Mapbender3



Astrid Emde

- Mapbende Developer Team
 - Mapbender PSC (Project Steering Committee)
 - Konzeption, Testen, Dokumentation, Release
-
- WhereGroup Bonn <http://wheringroup.com>



WhereGroup

Mapbender3 - Mapbender

demo.mapbender3.org/application/mapbender_user#

Diese Seite ist auf Englisch Soll sie übersetzt werden? Übersetzen Nein Englisch nie übersetzen Optionen

Mapbender3

Layertree Feature Info Print Legend WMS Loader GPS Line Ruler Area Ruler About

BORNHEIM Hörnchen Mülheim Mondorf Menden Deichhaus Buisdorf Rieden

SANKT AUGUSTIN Ort Niederpleis

BONN

Nordstadt Beuel-Mitte Beuel-Ost Köttinghoven Limperich Ramersdorf Oberkassel

Graurheindorf Auerberg Tannenbusch Bonn-Castell Schwarzrheindorf Neu Vilich

Widdersdorf Dinsdorf Eppendorf Lengsdorf Kessenich Granau Freizeitpark Rheinaue

Lessenich Oedekoven Impekoven Medinghoven Duisdorf Bruder Berg Venusberg Friesdorf Pütteldorf Villenviertel

2 km

25000000

OpenStreetMap contributors

Ziele des Workshops

- Mapbender3 kennenlernen
- Was bietet die Anwendung?
- Architektur und Installation
- Dienste laden
- Eigene Anwendung erzeugen
- Benutzer und Gruppe anlegen
- Rechtezuweisung
- Designanpassungen



WhereGroup

Was macht Mapbender?



WhereGroup

WebGIS Client Suite mit Administrations-Webinterface



WhereGroup

Erzeugen eines Geoportals
ohne eine Zeile Code zu schreiben!



WhereGroup

Anlegen und Pflegen eines OWS Repositories



WhereGroup

Zuweisung konfigurierter Dienste an Anwendungen



WhereGroup

Vergabe von Benutzer- und Gruppen-Rechten an Anwendungen und Dienste



WhereGroup

Mapbender Komponenten

Anwendungen

Dienste

Rollen



WhereGroup

Welche Komponenten nutzt Mapbender3?

- Symfony2 als PHP Framework
 - Doctrine, Twig, Monolog, Bootstrap...
 - Bundles
- OpenLayers
- MapQuery
- jQuery
- SQLite, PostgreSQL, MySQL, Oracle Datenbank



WhereGroup

File Edit View Bookmarks Favorites Help

mapbender (Mapbender Dev...)

GitHub Inc. (US) https://github.com/mapbender/



Google



Applications - Mapbender

Mapbender User Doc...

http://nemo.local/pr...

- Mapbender Manager

Index of /mapbender...

>>



Search or type a command



Explore Gist Blog Help



astroidex



Mapbender Development Team

mapbender

<http://mapbender3.org>

Joined on Jul 05, 2011

7

0

13

public repos private repos members

Repositories

Members

Edit mapbender's Profile

All Public Private Sources Forks Mirrors

mapbender-starter

Mapbender3 starter project

Last updated 4 hours ago

PHP ★ 9 ⌂ 0

mapbender

The PHP web mapping framework

Last updated 4 hours ago

JavaScript ★ 13 ⌂ 1

fom

Friends Of Mapbender Bundles

Last updated 4 hours ago

PHP ★ 1 ⌂ 0

owsproxy3

Owsproxy3 now Symfony2 based.

Last updated 3 months ago

PHP ★ 1 ⌂ 0

mapbender-print

Mapbender3 print bundle

Last updated 7 months ago

★ 1 ⌂ 0

mapquery

mapbender mapquery clone

Last updated 11 months ago

JavaScript ★ 3 ⌂ 0

Mapbender auf Github

Installation



WhereGroup

Systemvoraussetzungen

- >= PHP 5.3.8 (php5)
- PHP CLI interpreter (php5-cli)
- PHP SQLite extension (php5-sqlite)
- PHP PostgreSQL Erweiterung (php5-pgsql)
- PHP cURL extension (php5-curl)
- PHP Alternative PHP Cache (php-apc)
- PHP Internationalisierungserweiterung (php5-intl)



WhereGroup

- Dokumentation der Installation
- Workshop Installation über `install_mapbender3.sh` von OSGeo-Live
- Dateien liegen unter: `/var/www/mapbender3/`
- Datenbank PostgreSQL mapbender3
- Download <http://mapbender3.org/builds/>
- Mapbender3 auf OSGeo-Live



WhereGroup

Aufruf Mapbender3

- Developer Modus http://localhost/mapbender3/app_dev.php
- Produktiver Modus
<http://localhost/mapbender3/app.php>
- Symfony2 Test der Konfiguration
<http://localhost/mapbender3/config.php>



WhereGroup

Symfony Configuration - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Symfony Configuration 

localhost/mapbender3/config.php     Google



Welcome!

Welcome to your new Symfony project.

This script will guide you through the basic configuration of your project. You can also do the same by editing the '`app/config/parameters.yml`' file directly.

MAJOR PROBLEMS

Major problems have been detected and **must** be fixed before continuing:

1. Set the "`date.timezone`" setting in `php.ini*` (like `Europe/Paris`).

* Changes to the `php.ini` file must be done in "`/etc/php5/apache2/php.ini`".

[Re-check configuration >](#)

Unterstützung durch den Symfony Profiler

The screenshot shows a world map application running in Mozilla Firefox. The URL in the address bar is `http://localhost/mapbender-starter/app_dev.php/application/mapbender_user`. A red circle highlights the `/app_dev.php` part of the URL. A red arrow points from this circle to a white box containing the text `/app_dev.php`. Another red arrow points from the bottom right corner of the map area towards the bottom right corner of the browser window. The browser's status bar at the bottom shows the Symfony logo, PHP version (5.3.2-1ubuntu4.9), and memory usage (8704 KB). The bottom navigation bar includes links for `sf 2.0.0`, `PHP 5.3.2-1ubuntu4.9|xdebug|accel`, `app|dev|debug|4e721c007a66f`, and `ApplicationController::applicationAction|mapbender_application|200`.

Unterstützung durch den Symfony Profiler

The screenshot shows the Symfony Profiler interface within a Mozilla Firefox browser window. The title bar reads "Profiler - Mozilla Firefox". The address bar shows the URL http://localhost/mapbender-starter/app_dev.php/_profiler/4e721b4d2afab?panel=config. The browser tabs include "Profiler", "Handbook - Mapbender3", and "README.rst at master fro...". The main content area displays the "Project Configuration" panel, which lists the following settings:

Key	Value
Symfony version	2.0.0
Application name	app
Environment	dev
Debug	enabled

On the left, a sidebar menu includes "CONFIG", "REQUEST", "EXCEPTION", "EVENTS", and "LOGS" sections. At the bottom, there is a "Fertig" button.

Wo liegt was?

- Apache2 ALIAS mapbender3 zeigt auf:
`/var/www/mapbender3/web/`
- `app_dev.php` → `mapbender3/web/app_dev.php`
- Mapbender:
`mapbender3/mapbender/src/Mapbender/CoreBundle`



WhereGroup

Erzeugen Sie Ihre eigene Anwendung



WhereGroup

Anmeldung

- root-Benutzer wird bei der Installation erzeugt
- Registrierung und Passwort anfordern kann aktiviert werden

Login

Username:

Password:

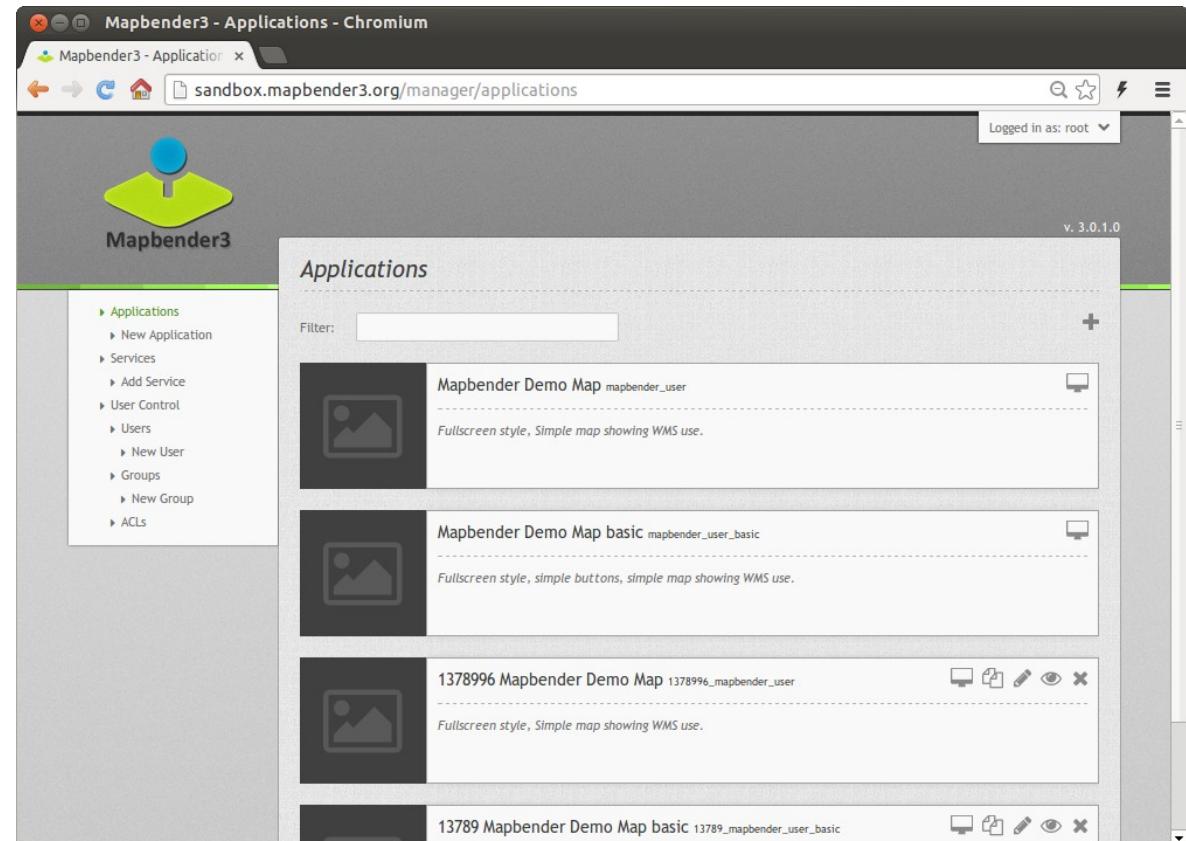
[▶ Register](#) [▶ Forgot password?](#)



WhereGroup

Anwendungsübersicht

- Übersicht der Anwendungen
- Aufruf legt Session auch für anonymen Benutzer an
- Anzeige mit Titel, Beschreibung, Übersichtsbild
- Start / Bearbeitung der Anwendung



WhereGroup



Mapbender3

v. 3.0.1.0

New Application

Base data

Security

Title*

demo

URL title*

demo

Description

Demo application

Create a new application by providing basic information and then use the edit mode to choose template, add elements and layers.



Mapbender3

v. 3.0.1.0

demo

- ▶ Applications
 - ▶ New Application
- ▶ Services
 - ▶ Add Service
- ▶ User Control
 - ▶ Users
 - ▶ New User
 - ▶ Groups
 - ▶ New Group
 - ▶ ACLs

Base data Layout Layers Security

Template*

Fullscreen template



Toolbar

Title	Type	+
-------	------	---

No elements added.

Sidepane

Title	Type	+
-------	------	---

No elements added.

Content

Title	Type	+
-------	------	---

No elements added.

Footer

Title	Type	+
-------	------	---

No elements added.



< Applications
 > New Application
> Services
 > Add Service
> User Control
 > Users
 > New User
 > Groups
 > New Group
 > ACLs

demo

Base d...
Templ...

Tags
Title
Keywords

Side...
The...
No...
Cont...
Tit...
No...

No...
Con...
Tit...
No...

Footer

Title

Type



Add element - *

Tree of map's layers

Legend Object
The legend object shows the legend of the map's layers.

Line/Area Ruler

Map ✓
MapQuery/OpenLayers based map

Navigation Toolbar
The Navigation Toolbar element provides a floating control to pan and zoom, similar to the OpenLayers PanZoomBar control. This element though is easier to use when custom styling is needed.

Overview
Renders a small overview map

Choose Map Element

Cancel



- > Applications
 - > New Application
- > Services
 - > Add Service
- > User Control
 - > Users
 - > New User
 - > Groups
 - > New Group
 - > ACLs

demo

Base d...

Tem...

Tool...

Tit...

No...

Side...

Tit...

No...

Con...

Tit...

No...

Footer

Title

Type

No elements added.

Add element - Map



Title*

Map

Layerset*

main

DPI*

main

overview

SRS*

EPSG:4326

Map units*

Degrees

Max. extent

min x*

0

min y*

40

max x*

20

max y*

60

Start. extent

min x*

5

min y*

45

max x*

15

max y*

55

Scales (csv)*

25000000,10000000,5000000,1000000,500000

Back

Ok

Cancel

Mapbender3 - demo - Chromium

Mapbender3 - demo

Mapbender3 - demo

sandbox.mapbender3.org/application/demo



Mapbender3



Dienste

**Einmaliges Veröffentlichen
Konfiguration
Zugriffskontrolle**



WhereGroup



Logged in as: root



Mapbender3

v. 3.0.1.0

- ▶ Applications
- ▶ New Application
- ▶ Services
- ▶ Add Service
- ▶ User Control
- ▶ Users
- ▶ New User
- ▶ Groups
- ▶ New Group
- ▶ ACLs

Add Service

OGC WMS

Serviceurl:

Username:

Password:

Load

Cancel



Logged in as: root



Mapbender3

v. 3.0.1.0

Services

- ▶ Applications
 - ▶ New Application
- ▶ Services
 - ▶ Add Service
 - ▶ User Control
 - ▶ Users
 - ▶ New User
 - ▶ Groups
 - ▶ New Group
 - ▶ ACLs

Filter

1
WMS

Germany



Germany

2
WMS

BGS 50000 scale digital geology



Note: This dataset is designed for the 1:50000 scale but can be viewed in this WMS between 1:100000 and 1:25000 (Only).

The 1:50 000 DiGMapGB data covering the whole of the United Kingdom is available in this OGC WMS service for your personal, non-commercial use only. Separate bedrock geology, superficial deposits, artificial ground, mass movement deposits and geological linear features layers are available in this service. For information about more of the British Geological Survey's maps that are available digitally please visit

<http://www.bgs.ac.uk/products/digitalmaps/digmapgb.html>. These data are delivered under the terms of the Open Government Licence (<http://www.nationalarchives.gov.uk/doc/open-government-licence/>), subject to the following acknowledgement accompanying the reproduced BGS materials: Contains British Geological Survey materials copyright NERC [year]. Contact us if you create something new and innovative that could benefit others using bgsdata@bgs.ac.uk.

3
WMS

British Geological Survey (BGS) 1:625 000 scale digital hydrogeological data



The hydrogeological map indicates aquifer potential in generalised terms using a threefold division of geological formations: those in which intergranular flow in the saturated zone is dominant, those in which flow is controlled by fissures or

FOSSGIS 2014 in Berlin



Logged in as: root



Mapbender3

v. 3.0.1.0

WMS BGS 50000 scale digital geology

Metadata

Contact

Details

Layers

Back

Title:	BGS 50000 scale digital geology
Name:	OGC:WMS
Version:	1.1.1
Origin URL:	http://maps.bgs.ac.uk/ArcGIS/services/BGS_Detailed_Geology/MapServer/WMServer?service=WMS&version=1.1.1&request=GetCapabilities
Abstract:	<p>Note: This dataset is designed for the 1:50000 scale but can be viewed in this WMS between 1:100000 and 1:25000 (Only). The 1:50 000 DiGMapGB data covering the whole of the United Kingdom is available in this OGC WMS service for your personal, non-commercial use only. Separate bedrock geology, superficial deposits, artificial ground, mass movement deposits and geological linear features layers are available in this service. For information about more of the British Geological Survey's maps that are available digitally please visit http://www.bgs.ac.uk/products/digitalmaps/digmapgb.html. These data are delivered under the terms of the Open Government Licence (http://www.nationalarchives.gov.uk/doc/open-government-licence/), subject to the following acknowledgement accompanying the reproduced BGS materials: Contains British Geological Survey materials copyright NERC [year]. Contact us if you create something new and innovative that could benefit others using bgsdata@bgs.ac.uk.</p>
Online Resource:	http://www.bgs.ac.uk/products/digitalmaps/digmapgb_50.html
Exception Formats:	application/vnd.ogc.se_xml , application/vnd.ogc.se_inimage , application/vnd.ogc.se_blank
Fees:	none
Access constraints:	<p>Note: This dataset is designed for the 1:50000 scale but can be viewed in this WMS between 1:100000 and 1:25000 (Only). These data are delivered under the terms of the Open Government Licence (http://www.nationalarchives.gov.uk/doc/open-government-licence/), subject to the following acknowledgement accompanying the reproduced BGS materials: Contains British Geological Survey materials copyright NERC [year]. Contact us if you create something new and innovative that could benefit others</p>



Mapbender3

v. 3.0.1.0

Wms Instance - Germany

- ▶ Applications
 - ▶ New Application
- ▶ Services
 - ▶ Add Service
- ▶ User Control
 - ▶ Users
 - ▶ New User
 - ▶ Groups
 - ▶ New Group
 - ▶ ACLs

Origin URL

Save**Cancel**

http://wms.wherogroup.com/cgi-bin/germany.xml?VERSION=1.1.1&REQUEST=GetCapabilities&SERVICE=WMS

Format*

image/png

 Visible

Infoformat

text/html

 Proxy

Exceptionformat

application/vnd.ogc.se_xml

 Transparency

Opacity*

100

 Tiled

Title	Minsc	Maxsc	Active	Select		Info		Toggle		Reorder	
				allow	on	allow	on	allow	on	allow	on
Germany	1	9.99999460	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▶ topography	1	9.99999460	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▶ border	750000	124999932f	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▶ federal states	750000	7999996	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▶ places	0	8999995	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Eigene Anwendung

The screenshot shows a map application window titled "Mapbender3 - Mapbend". The URL in the address bar is "localhost/mb3b/app_dev.php/application/mapbender_user_basic#". The map displays the city of Bonn, Germany, with its districts labeled: BORNHEIM, Graurheindorf, Bonn-Castell, Nordstadt, Weststadt, Südstadt, Lengsdorf, Dottendorf, Hochkreuz, Kessenich, Gronau, Limperich, Neu Mühle, Beuel-Ost, Beuel-Mitte, Vicht-Rheindorf, Schwarzenhain, Geistviertel, Hangelar, Niederberg, Heidebergen, Gieders, Röder, Niederkassel, Troisdorf, Bonnheim, Sankt Augustin, Königswinter, and Rommelshoven. A river flows through the center of the city. A legend in the top right corner shows various icons: a blue square with dots, a blue circle with an 'i', a blue printer, a red square with a grid, a blue location pin, a blue double arrow, and a blue person icon. A zoom control on the right side includes a yellow 'C' button, a magnifying glass, and zoom in/out buttons. A scale bar indicates "2 km". A small inset map in the bottom right corner shows a zoomed-in view of the Bonn area. Red arrows point from text labels to specific features: one arrow points to the toolbar area with the text "eigene Farben", another points to the top icons with "Images als Icons", and a third points to the zoom controls with "einzelne Buttons individuell". Another red arrow points to the inset map with "Anpassung der Elemente". The bottom status bar shows "ETRS 50000".

eigene Farben
- Toolbar
- Icons
- Icon aktiv

Images als Icons

einzelne Buttons individuell

Anpassung der Elemente

Rollen



WhereGroup



Logged in as: root



Mapbender3

v. 3.0.1.0

New User

Base data

Profile

Groups

Security

Username*

E-Mail*

Choose password*:

Confirm password*:

Create

Cancel

Erweiterbare Benutzerinformation

Base data Profile Groups Security

First name	Astrid
Last name	Emde
Notes	
Phone	0228-909039-0
Organization	WhereGroup
Role	Author
Street	Eifelstr. 7
Zip code	50119
City	Bonn
Country	Germany

- Basiseingaben
 - Benutzer
 - Passwort
 - Email
- Profilkasse mit erweiterter Information
 - nach INSPIRE

Save

Cancel



Logged in as: root



Mapbender3

v. 3.0.1.0

demo

- ▶ Applications
 - ▶ New Application
- ▶ Services
 - ▶ Add Service
- ▶ User Control
 - ▶ Users
 - ▶ New User
 - ▶ Groups
 - ▶ New Group
 - ▶ ACLs

[Base data](#) [Layout](#) [Layers](#) **Security** PublishFilter [view](#)[edit](#)[delete](#)

operator

master

owner



Astrid Emde

[view](#)[edit](#)[delete](#)

operator

master

owner



root

[view](#)[edit](#)[delete](#)

operator

master

owner



IS_AUTHENTICATED_ANONYMOUSLY

[view](#)[edit](#)[delete](#)

operator

master

owner

[Save](#)[Cancel](#)



Mapbender3

Download

Home Was ist Mapbender3? Los geht's Dokumentation Community Download

The screenshot shows the Geoportal.DE website. At the top, there is a header with the logo '#Geoportal.DE' and the tagline 'suchen. finden. verbinden.'. Below the header, there is a navigation bar with links for 'Karten', 'Suche', and 'Service'. The main content area shows a map viewer with a search bar labeled 'Suche nach Karten:' and various map controls like zoom and orientation. To the right of the map viewer, there is a text block describing the service as a 'Karten-Client für die Darstellung von Landkarten, Luftbilder, Themenkarten und Suchmaschine für Geodaten aus ganz Deutschland.' Below this, there is another text block in English: 'Mappingclient for visualization of maps, aerial views, thematic maps and search engine for geodata from Germany.' At the bottom of the screenshot, there is a URL 'http://www.geoportal.de/' and a location input field set to 'Bonn'.

• • • •

Willkommen auf mapbender3.org

Willkommen auf der Mapbender3-Seite

Mapbender ist ein Content Management System für Kartenanwendungen und Geodatendienste. Die Software ist in PHP und JavaScript implementiert. Mapbender wird mit vorkonfigurierten Anwendungen zur Anzeige, Navigation und Abfrage von Karten ausgeliefert. Alle Anwendungen können über die Weboberfläche den eigenen Bedürfnissen angepasst oder komplett neu implementiert werden.

Mapbender3 ist der Nachfolger der erfolgreichen Mapbender Version 2 und basiert auf aktuellen Technologien wie dem Web Application Framework Symfony2, JQuery und OpenLayers.

[Weiterlesen](#)



Rapperswil 12.-14. Juni
2013



17.-23.
September
2013



Mapbender ist ein offizielles
OSGeo-Projekt.

Über Mapbender

Mapbender.org

Projekt-Wiki zu Mapbender 2
und Mapbender 3:

- Informationen zur Community,
PSC ...
- <http://www.mapbender.org>

[Table Of Contents](#)[Welcome to Mapbender3's documentation!](#)

- [Indices and tables](#)

[Previous topic](#)[Welcome to the Mapbender3 documentation](#)[Next topic](#)[The Book](#)[This Page](#)[Show Source](#)[Quick search](#)[Go](#)

Enter search terms or a module, class or function name.

Hands on



WhereGroup

Die Aufgabe

- WMS laden
- Anwendung erzeugen
- Anwendung mit Elementen bestücken
- Anwendung mit WMS bestücken
- Benutzer anlegen
- Anwendung diesem Benutzer zuweisen



WhereGroup

Mapbender3 Quickstart

- <http://doc.mapbender3.org/en/book/quickstart.html>

Elementdokumentation

- <http://doc.mapbender3.org/en/bundles/Mapbender/CoreBundle/index.html>



WhereGroup

- WMS laden in Version 1.1.1 oder 1.3.0
- <http://osm-demo.wheringroup.com/service?REQUEST=GetCapabilities&Service=WMS&Version=1.1.1>
- <http://wms.wheringroup.com/cgi-bin/germany.xml?VERSION=1.1.1&REQUEST=GetCapabilities&SERVICE=WMS>
- http://wms.wheringroup.com/cgi-bin/mapbender_user.xml?VERSION=1.1.1&REQUEST=GetCapabilities&SERVICE=WMS
- <http://www.geoportal.de/DE/Geoportal/geoportal.html?lang=de>



WhereGroup

Anwendung erzeugen

- Anwendung mit individuellem Namen z.B. demo erzeugen
- Map-Element in content einfügen
 - EXTENT Deutschland
 - minx 5.6 miny 47.24
 - maxx 15.4 maxy 55.02
 - Maßstäbe kommassepariert angeben
 - 5000000,100000,50000,25000,10000,7500,5000,2500,1000,500
 - Projektionen angeben z.B. EPSG:4326



WhereGroup

WMS zu Anwendung hinzufügen

- Layerset für Map und ggf. Overview anlegen
- Geladenen WMS in Layerset einfügen
- Ggf. Layer konfigurieren



WhereGroup

Anwendung mit Elementen bestücken

- Infos zu den Elementen gibt es unter
 - <http://doc.mapbender3.org/en/bundles/Mapbender/CoreBundle/>
- Legende, Overview, Measure usw.
- Achtung: Elemente brauchen oft einen Button, um sie zu aktivieren



WhereGroup

Benutzer anlegen

- Benutzer mit Ihrem Namen oder dem Namen Schulung anlegen



WhereGroup

Anwendung User zuweisen

- Über Application → Stift → Application Security
- + → User auswählen → Recht view zuweisen
- Test der Freigabe über Anmeldung als Benutzer Schulung

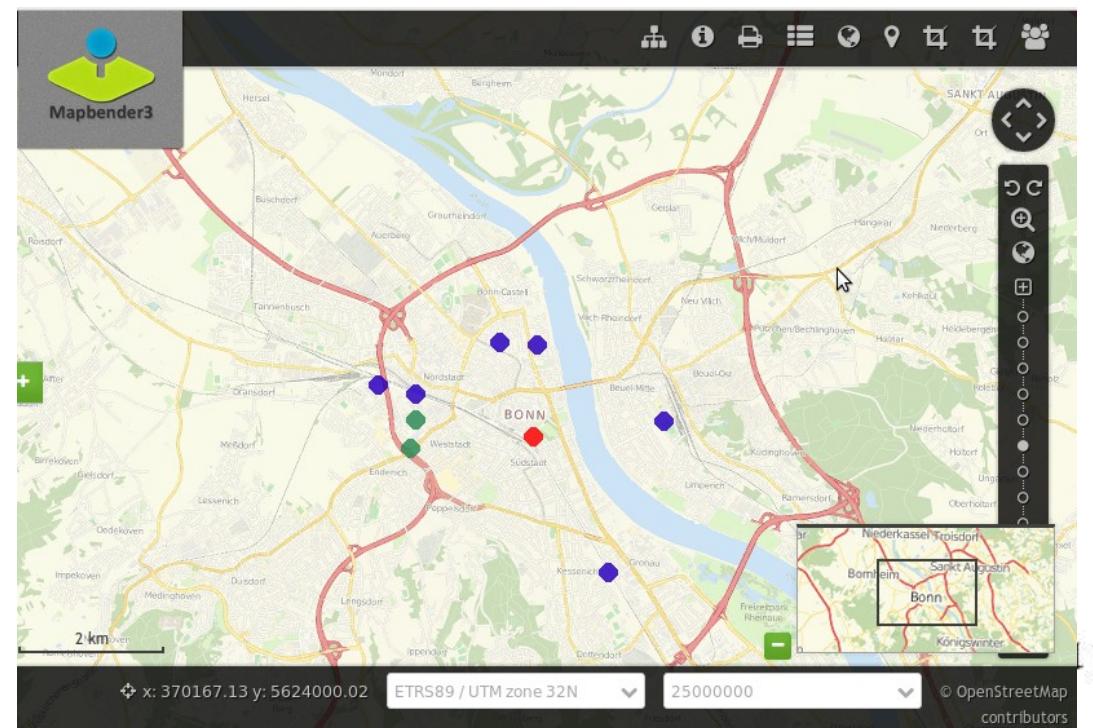


WhereGroup

Mapbender3 Demo

Testen Sie Mapbender3

<http://mapbender3.org/demo/>



Installation

Installieren Sie Mapbender3 über das Download Paket

<http://mapbender3.org/builds/>

Oder über Git-Repositories

<https://github.com/mapbender/mapbender-starter>

Dokumentation zur Installation

<http://doc.mapbender3.org>



WhereGroup

Wo finden Sie uns?

- <http://mapbender3.org>
- Mapbender3 Code <http://github.com/mapbender>
- Roadmap <http://mapbender3.org/de/roadmap>
- Milestones / Bugtracker
<https://github.com/mapbender/mapbender/issues>
- <http://osgeo.org/mapbender>



WhereGroup

Vielen Dank für ihre Aufmerksamkeit

Astrid Emde (astrid.emde@wheringroup.com)
oder

mapbender-users@list.osgeo.org

Creative Commons Share Alike License 3.0

Copyright © 2014: Astrid Emde

Mit freundlicher Unterstützung der



WhereGroup