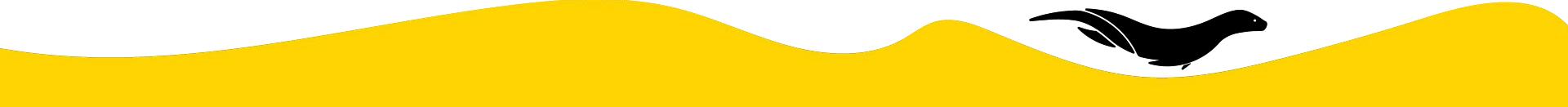


# Oskari for developers



# Oskari - developer perspective

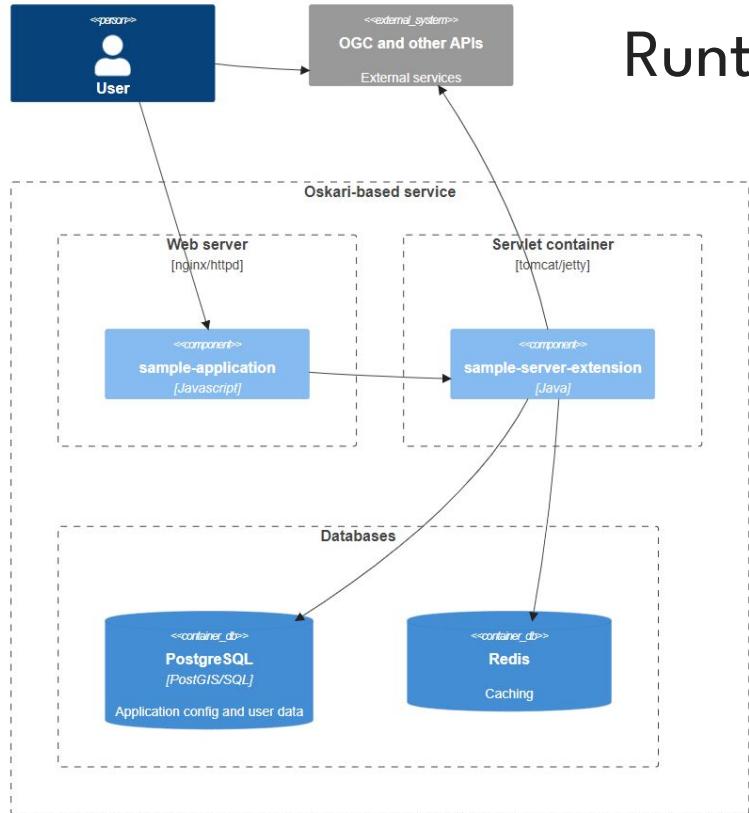
- Quick start using downloadable zip with bundled Tomcat
- Light-weight customization using sample-application/server:
  - Template repository as base for customized applications
  - Application customization
  - Adding custom functionalities
- Version upgrades usually easy to do:
  - Bump dependency version
  - Automatic database migrations
  - Change log on [oskari.org](https://oskari.org):
    - What's new / changed
    - Migration guide
    - <https://oskari.org/documentation/docs/3.1.0/12-Changelog>
- When doing changes or new functionalities, consider if it could be included in the Oskari repositories
  - Pull requests are accepted
  - Can be easier way to document/maintain functionalities
  - Let others benefit as well



The image displays a collage of five screenshots from the OSKARI web map application, illustrating its interface and functionality across different themes and regions.

- Top Left:** A world map view showing landmasses in white against a blue ocean. The menu bar includes "MAP LAYERS", "MY DATA", "MAP PUBLISHING", "MAP LEGENDS", "USER GUIDE", and "THEMATIC MAPS". A search bar at the top left contains the placeholder "Search location".
- Top Middle:** A map of Europe and the Middle East. The menu bar is identical to the first screenshot. A "Welcome" dialog box is open, asking if the user is here for the first time and providing a quick guide. It includes a "Next" button and a checkbox for "Do not show this message again".
- Top Right:** A 3D globe view of the Earth, centered on Europe and the Middle East. The menu bar is identical to the first screenshot. A "Welcome" dialog box is open, asking if the user is here for the first time and providing a quick guide. It includes a "Next" button and a checkbox for "Do not show this message again".
- Middle Left:** A detailed map of Finland and surrounding regions. The menu bar is identical to the first screenshot. A "Welcome" dialog box is open, asking if the user is here for the first time and providing a quick guide. It includes a "Next" button and a checkbox for "Do not show this message again".
- Middle Right:** A "Stylized service example" view of a map area, likely Northern Europe or Scandinavia. The menu bar includes "METADATA SEARCH", "MAP LAYERS", "MY DATA", "MAP PUBLISHING", "MAP LEGENDS", "USER GUIDE", and "THEMATIC MAPS". A "Stylized app" dropdown menu is open. A "Welcome" dialog box is open, asking if the user is here for the first time and providing a quick guide. It includes a "Next" button and a checkbox for "Do not show this message again".

# Runtime environment



- Java-based web app
  - Tomcat/Jetty
  - PostgreSQL(+PostGIS)
  - Redis
- Javascript SPA
- API-integrations:
  - WMS/WMTS/WFS etc OGC-APIs
  - Vector tile
  - Bing, ArcGIS
  - Statistical data PxWeb, SotkaNET
  - Search backend



## Main configuration file: **oskari-ext.properties**

```
# change to match your database connection parameters  
db.url = jdbc:postgresql://localhost:5432/oskaridb  
db.username = oskari  
db.password = oskari
```

Overrides using ENV-variables:

```
OSKARI_DB_URL=jdbc:postgresql://somehost:5432/somedb  
OSKARI_DB_USERNAME=someuser  
OSKARI_DB_PASSWORD=passwd
```



# Open source

<https://github.com/oskariorg>

- sample-server-extension
  - oskari-server
- sample-application
  - oskari-frontend
  - oskari-frontend-contrib



The screenshot shows the OSKARI map application interface. On the left, there's a vertical sidebar with navigation links: MAP LAYERS (1), MY DATA, MAP PUBLISHING, MAP LEGENDS, USER GUIDE, and THEMATIC MAPS. Below these are various icons for search, zoom, and other functions, with a '3D' button at the bottom. A 'user' dropdown and 'Login' button are also present. At the bottom, there are 'World' and 'Change language' dropdowns.

The main area features a map of Northern Europe and parts of Russia and Turkey. A 'Measurement Results' dialog box is open, containing instructions to draw a measurable line by clicking its breaking points, a 'Delete all measurements' button, and a 'Cancel' button. Several yellow arrows point to specific UI elements: one arrow points to the 'Search location' bar at the top; another points to the 'Measurement Results' dialog; a third points to the 'Map Layers' sidebar; a fourth points to the toolbar icons at the bottom of the map; and a fifth points to the 'Selected layers' count in the 'Map Layers' sidebar.

# UI-concepts

- “tile”
- “flyout”
- “bundle”
- “app setup”
- “popup”
- “toolbar”
- “plugin”
- “event”
- “request”
- “action route”

A decorative graphic at the bottom right features a black silhouette of a seal swimming towards the right, set against a stylized yellow wave.

# Customization: default content/functionality setup

master sample-server-extension / app-resources / src / main / resources / flyway / example /

ZakarFin Migrate styles to new structure · 6740d24 · last year · History

Name	Last commit message	Last commit date
..		
V1_0_0_initial_dataproviders.sql	Restore Oskari.org as data provider	4 years ago
V1_0_1_initial-users.sql	Update migrations for 2.x table names	4 years ago
V1_0_2_register-sample-info-bundle.sql	Update migrations for 2.x table names	4 years ago
V1_1_0_register-regionset-countries.sql	Countries SRS 4326 -> 3857	4 years ago



# Customization: default content/functionality setup

sample-server-extension / app-resources / src / main / java / flyway  
/ example /

DenverCoder544 add find by coordinates bundle to DEFAULT views ✓ cb03440 · 7 months ago History

Name	Last commit message	Last commit date
...		
V1_0_3_initial_db_content.java	New optional layout	2 years ago
V1_1_1_add_unsd_datasources.java	Update migrations for 2.x table names	4 years ago
V1_1_2_add_permission_for_regionset.java	Migrate to Oskari 2.x with newer Flyway	4 years ago
V1_1_3_add_stylized_appsetup.java	Use navbar styling from theme instead of base HTML	last year
V1_1_4_add_findbycoordinates_bundle.java	add find by coordinates bundle to DEFAULT views	7 months ago



# Customization

- App setup
  - Theme
  - Functionalities

[sample-server-extension/](#)

[app-resources/src/main/](#)

[resources/json/apps/](#)

[geoportal-3067.json](#)

```
{  
    "name" : "Finland",  
    "type" : "DEFAULT",  
    "default" : true,  
    "public" : true,  
    "onlyUuid" : false,  
    "oskari" : {  
        "application" : "geoportal",  
        "page" : "geoportal_white",  
        "development_prefix" : "/applications",  
        "metadata": {  
            "theme": {  
                "color": {  
                    "header": {  
                        "bg": "#ffffff",  
                        "text": "#00BFFF",  
                        "icon": "#1E90FF"  
                    },  
                    "primary": "#ffffff",  
                    "accent": "#00BFFF",  
                    "text": "#000000"  
                },  
                "navigation": {  
                    "color": {  
                        "primary": "#FFFFFF"  
                    }  
                }  
            }  
        }  
    }  
},  
{ "id" : "infobox" },  
{ "id" : "statehandler" },  
{ "id" : "search" },  
{ "id" : "metadatasearch" },  
{ "id" : "layerlist" },  
{ "id" : "coordinateTool"},  
{ "id" : "metadataflyout" },  
{ "id" : "mydata" },  
{ "id" : "publisher2" },  
{ "id" : "maplegend" },  
{  
    "id" : "userguide",  
    "config" : {  
        "tags" : "userguide",  
        "flyoutClazz" : "Oskari.mapframework.b  
    }  
},  
,  
{ "id" : "guidedtour" },  
{ "id" : "sample-info" },  
{ "id" : "myplaces3" },  
{ "id" : "printout" },  
{ "id" : "maprotator" },  
{ "id" : "myplacesimport" },  
{  
    "id" : "myplacesimport2" }  
}
```

# Oskari 3.x and beyond

- Java version updated from 8 to 17
  - Can be run with more recent versions as well.
- Frontend loader changes
  - packages/\*/bundle.js on their way out, new way: bundles/\*/index.js
  - <https://github.com/oskariorg/oskari-frontend/pull/2886>
  - locales automatically detected
- New base bundle:

```
import { BasicBundleInstance } from 'oskari-ui/BasicBundleInstance';

class MyBundleInstance extends BasicBundleInstance {
    start () {
        console.log('Hello world')
    }
}

Oskari.bundle('hello-world', () => new MyBundleInstance());
```



# Example integration: search

Concept: SearchChannel

Backing service for search can be anything really:

- Nominatim OpenStreetMap
- MML Geokoodauspalvelu
- WFS-services
- Any custom backend

Searching using coordinates/reverse geocoding also an option.



# Oskari-development

Developed using pull requests through GitHub

- oskari-frontend
- oskari-server

Changelog/migration guides for applications:

- Release notes
- Migration guide
- Template application repository
- (Paikkatietoikkuna repository [github.com/nls-oskari](https://github.com/nls-oskari))

Possible to ask questions in Gitter chat, for example



# Thank you!

- **Website:** <https://oskari.org/>
- **GitHub:** <https://github.com/oskariorq/>
- **LinkedIn:** [Oskari - Open Source](#)
- **Email:** [info@oskari.org](mailto:info@oskari.org)

