

Marine Sensitivities Tech Docs

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Preface

This is a Quarto book.

To learn more about Quarto books visit <https://quarto.org/docs/books>.

1 Introduction

This is a book created from markdown and executable code.

See Knuth (1984) for additional discussion of literate programming.

```
1 + 1
```

```
[1] 2
```

Part I

Components

2 Server

The server is for serving up any web services outside those of Github (e.g., [website](#), [docs](#) and R package [msens](#)) using [Docker](#) (see the [docker-compose.yml](#); with reverse proxying from subdomains to ports by [Caddy](#)).

2.1 Setup

For instructions on launching an Amazon instance and installing the server software, see [Server Setup](#) · [MarineSensitivity/server Wiki](#).

2.2 Services

The server is running the following services:

- **[rstudio](#)**
integrated development environment (IDE) to code and debug directly on the server
[More info..](#)
- **[shiny](#)**
interactive applications
e.g., [shiny.marinesensitivity.org/map](#)

[More info..](#)
- **[pgadmin](#)**
PostgreSQL database administration interface

[More info..](#)
- **[api](#)**
custom API: using R plumber

[More info..](#)

- [swagger](#)
generic database API: using PostGREST

[More info..](#)

- [tile](#)
spatial database API: using pg_tileserv for serving vector tiles

[More info..](#)

3 Workflows

```
librarian::shelf(  
  dplyr, gh, glue, knitr, tidyjson,  
  quiet = T)  
# renv::dependencies(); renv::snapshot()  
library(dplyr); library(gh); library(glue); library(knitr); library(tidyjson)  
  
org <- "MarineSensitivity"
```

3.1 Get Descriptions

```
gh(glue("GET /orgs/{org}/repos")) |>  
  spread_all() |>  
  as_tibble() |>  
  select(name, description) |>  
  arrange(name) |>  
  kable()
```

| name | description |
|-----------------------------|--|
| MarineSensitivity.github.io | default website |
| api | application programming interface (API) using R Plumber package |
| apps | Shiny applications |
| docs | documentation for BOEM's offshore environmental sensitivity index products |
| manuscripts | Manuscripts with review of sensitivities by industry and receptors (species, habitats, human uses) |
| msens | R library of functions for mapping marine sensitivities, sponsored by BOEM |
| objectives | repository for issues spanning multiple repositories and doing big picture roadmapping |
| server | server setup for R Shiny apps, RStudio IDE, R Plumber API, PostGIS database, pg_tileserv |

| name | description |
|-----------|---|
| workflows | scripts for testing data analytics and visualization as well as production workflows |

4 Libraries

or maybe later Python module

5 API

There are actually three APIs, each used for different purposes:

1. **api**
custom API: using R [plumber](#)
source: [MarineSensitivity/api](#)
2. **swagger**
generic database API: using [PostGREST](#)
source: Postgres database, non-spatial
3. **tile**
spatial database API: using [pg_tileserv](#) for serving vector tiles
source: Postgres database, spatial

6 Apps

7 Docs

8 Summary

In summary, this book has no content whatsoever.

`1 + 1`

[1] 2

References

Knuth, Donald E. 1984. “Literate Programming.” *Comput. J.* 27 (2): 97–111. <https://doi.org/10.1093/comjnl/27.2.97>.