COPtool

COPtool INSTALLATION GUIDE

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DISCLAIMER

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Content

1. Background

In the event of a maritime accident involving HNS, maritime authorities must take numerous decisions to organize the best response strategy, i.e., one that minimizes risks to human health (including incident response teams, crew members and coastal communities), to the marine environment, for maritime safety and for socio-economic activities and facilities. While many key decisions and considerations are prescribed in national or regional contingency plans, operational response activities will generally need ongoing adjustment or review to reflect the most recent information available as the contamination event evolves. In such a rapidly changing situation, an efficient exchange of information between competent decision-making authorities and response teams on the ground can greatly facilitate both decision-making processes and organizational processes.

The purpose of work package 5 of the Manifests project (Manifests decision support system) is to develop an efficient information system that helps (1) decision makers understand the situation at stake and its likely evolution in the coming hours and days; (2) identify the population, ecosystems and socio-economic assets at risk and (3) share useful information with response teams deployed at sea, in the air or on the coast.

Building on the experience gained and development carried out during the previous HNS-MS and MARINER projects, the MANIFESTS decision support system (DSS) will integrate several services, including the DSS Common Operational Picture (COPtool).

This COPtool refers to a system designed so that during a contingency, the exchange of information that occurs between the maritime authorities and the different response teams (sea, coast, air) is carried out in the most efficient way possible, ensuring that all actors involved in the crisis committee and response teams can access the same data. These can be standard reports (such as the Standard Pollution Observation Report of the Bonn Agreement), images, videos and any other georeferenced data collected by response teams, as well as satellite observations, model simulation results, exclusion areas, location of response media, requests for new response actions shared by the crisis.

The COPtool documentation is composed by:

- Installation guides (this document).
- User Manual.
- DSS Implementation report.

2. Services

The platform consists of the following services:

- API: Consisting of a REST API that will allow the consultation, creation, update, and deletion of data. This service will be in charge of user authentication.
- WEB: This service will be in charge of serving the resources and managing the redirection of requests to the data service.

2.1. Software Requirements

- Operating System: Windows/Linux
- PostgreSQL https://www.postgresql.org/ (>9.5)
- PostGIS: https://postgis.net/
- Java/OpenJDK 1.8
- Apache with mod_proxy_ajp, mod_ssl, mod_rewrite https://httpd.apache.org/
- JDBC authentication driver

2.2. Files

- API service resources: *coptool-api.jar*
- WEB service resources: *coptool-web.jar*
- Database backup (PostgreSQL): *coptool_db.zip*
- *JDBC driver: sqljdbc_auth.dll*
- *WinSW software: winsw-template.zip*

3. Database

The database requires postgreSQL 9.5 or higher with the PostGIS extension (created with PostGis v3.1).

Create the user and the database

```
CREATE USER coptool WITH SUPERUSER PASSWORD [yourpassword];
CREATE DATABASE "coptool" WITH owner=coptool;
```

Edit pg_hba.conf to trust local addresses.

Import into the database the data structure and default data from the backup **coptool.sql**. This backup was created with PostGis v3.1.

```
pg_restore -h localhost -p 5432 -U coptool -d coptool -v coptool.sql
```

The connection to the database will be configured in the properties file application.yml of the API service.

4. API Service Settings

1- Extract in a new temporary folder: API Service\coptool-api.zip

2- Edit application.yml from \BOOT-INF\classes.

```
server:
  port: ${port:9000}
spring:
  http:
    multipart:
      enabled: true
      location: /path/to/temp
      max-file-size: 200MB
      max-request-size: 200MB
  application:
    name: coptool-api
  datasource:
    platform: postgres
    url: jdbc:postgresql://localhost:5432/${db:coptool}
    username: coptool
    password: [yourpassword]
arcopol:
  visor-url: http://url/to/viewer/
```

3- In the root folder, compress META-INF, BOOT-INF and org into zip, with no compression.

4- Rename the compressed file to coptool-web.jar