



Broadsea 3.x: "BROADening the ohdSEA"

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Affiliations

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OHDSI Broadsea Evolution

“Broadsea is the easiest way to install (& upgrade) the OHDSI tools”

v1.0

Atlas/WebAPI & RStudio Docker images on Mac/Linux/Windows

10k+ Downloads



v2.0

Pre-populated demo postgres database image & Traefik reverse proxy

v3.0

Docker profiles for a-la-carte services, more Traefik networking, environment variable driven deployment, new OHDSI apps, build from Git

```
docker-compose --profile default up -d
```

<https://github.com/OHDSI/Broadsea>



OHDSI Broadsea 3.x

traefik

Proxy with/without SSL and routing

quarto

Content Page



Perseus

ETL OMOP
CDM



Achilles
DQD
Ares
Indexer

Post
Processing



ATLAS / WebAPI

SOLR
Search
Index

Vocab
Import

PHOEBE
File Load

ATLAS-DB Demo DB

Design & Generate Cohorts



ARES

OHDSI Network
Study Feasibility



RStudio
HADES

Execute
Study



POSIT
Connect

Open
Source
Shiny
Server

Share Evidence



ATLAS Security Providers

Basic, LDAP, AD
OpenID, SAML

Build / Launch Options

Build from GitHub
Docker profiles

Databases

All OHDSI
supported DBs

Configuration

One templated
.env file



Docker Secrets

- default
 - atlas (“/atlas”)
 - WebAPI (“/WebAPI”)
 - AtlasDB (a Postgres instance for Atlas/WebAPI)
 - HADES (“/hades”)
 - A splash page for Broadsea (“/”)
- atlas-from-image
 - Pulls the standard Atlas image from Docker Hub
- atlas-from-git
 - Builds Atlas from a Git repo
 - Useful for testing new versions of Atlas that aren’t in Docker Hub
- webapi-from-image:
 - Pulls the standard WebAPI image from Docker Hub
- webapi-from-git
 - Builds WebAPI from a Git repo
 - Useful for testing new versions of WebAPI that aren’t in Docker Hub
- atlasdb
 - Pulls the standard Atlas DB image, a Postgres instance for Atlas/WebAPI
 - Useful if you do not have an existing Postgres instance for Atlas/WebAPI
- solr-vocab-no-import
 - Pulls the standard SOLR image from Docker Hub
 - Initializes a core for the OMOP Vocabulary specified in the .env file
 - No data is imported into the core, left to you to run through the SOLR Admin GUI at “/solr”
- solr-vocab-with-import
 - Pulls the standard SOLR image from Docker Hub
 - Initializes a core for the OMOP Vocabulary specified in the .env file
 - Runs the data import for that core
 - Once complete, the solr-run-import container will finish with an exit status; you can remove this container

- ares
 - Ares “/ares”
 - Builds Ares web app from Ares GitHub repo
 - Exposes a volume mount point for adding Ares files (see [Ares GitHub IO page](#))
- content
 - A splash page for Broadsea (“/”)
- omop-vocab-pg-load
 - Using OMOP Vocab files downloaded from Athena, this can load them into a Postgres instance (can be Broadsea’s atlasdb or an external one)
 - Rebuilds the CPTs using the CPT jar file from Athena, with UMLS API Key (see .env file Section 9)
 - Creates the schema if necessary
 - Runs copy command for each vocabulary CSV file
 - Creates all necessary Postgres indices
 - Once complete, the omop-vocab-load container will finish with an exit status; you can remove this container
- phoebe-pg-load
 - For Atlas 2.12+, which offers Concept Recommendation options based on the [Phoebe project](#)
 - Loads Phoebe files into an existing OMOP Vocabulary hosted in a Postgres instance (can be Broadsea’s atlasdb or an external one)
 - Note: your Atlas instance must use this OMOP Vocabulary as its default vocabulary source in order to use this feature
 - Once complete, the phoebe-load container will finish with an exit status; you can remove this container



Broadsea 3.1 dot env file sections

Section 1: Broadsea Host

Section 2: Atlas GUI configuration

Section 3: WebAPI Database configuration

Section 4: Atlas security provider configuration

Section 5: WebAPI security configuration

Section 6: Building Atlas or WebAPI from Git

Section 7: SOLR Vocab (optional)

Section 8: HADES credentials to use in RStudio


Section 9: Postgres and UMLS credentials for loading OMOP Vocab files into Postgres schema


Section 10: Postgres credentials for loading Phoebe file for Atlas 2.12+ Concept Recommendations into Postgres hosted OMOP Vocabulary schema

Section 11: Ares Data Folder config


Section 12: Broadsea Content Page config




 OHDSI Broadsea 3.0


Atlas

ATLAS is an open source software tool for researchers to conduct scientific analyses on standardized observational data converted to the OMOP Common Data Model V5. Researchers can create cohorts by defining groups of people based on an exposure to a drug or diagnosis of a particular condition using healthcare claims data. ATLAS has vocabulary searching of medical concepts to identify people with specific conditions, drug exposures etc. Patient profiles can be viewed within a specific cohort allowing visualization of a particular subject's health care records. Population effect level estimation analyses allows for comparison of two different cohorts and leverages R packages.


Ares

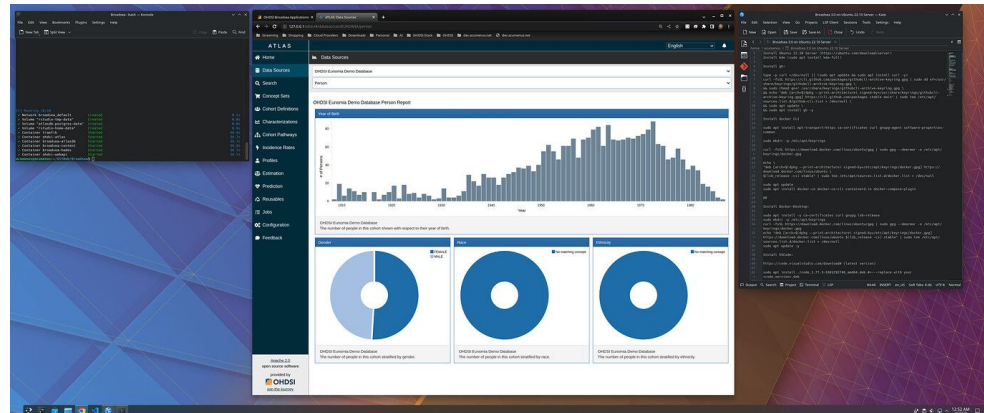
Ares is a web-based reporting tool designed to offer integrated characterization and data quality assessment for observational health data sources adhering to the OMOP Common Data Model. It provides access to analyses for a network of observational health data sources, as well as detailed data source and historical analyses, enabling informed decision-making based on reliable data. With its user-friendly interface and powerful reporting capabilities, Ares is an ideal platform for healthcare professionals and researchers seeking deeper insights into their data.


HADES

HADES (formally known as the OHDSI Methods Library) is a set of open source R packages for large scale analytics, including population characterization, population-level causal effect estimation, and patient-level prediction. The packages offer R functions that together can be used to perform an observation study from data to estimate and supporting statistics, figures, and tables.

Powered by OHDSI Broadsea

OHDSI Broadsea 3.1 Live Demo





Broadsea future plans

- Docker Secrets
- Add additional applications:
 - Example LDAP server
 - Arachne Execution Engine
 - OHDSI Perseus ETL
 - Community Edition Shiny Server
 - Posit Connect Commercial Server
- Add CDM lifecycle services
 - Achilles / DQD / AresIndexer
 - Atlas Source Management (Add/Archive)
- GitHub Actions for CI/CD testing



podman

 Estimation

 Prediction

 Broadsea Default Profile (Linux and Mac) passing

default.yml

on: push

Matrix: default

 default (macos-12) 13m 34s

 default (ubuntu-22.04) 2m 28s



Broadsea vs WebAPI distinction

- Broadsea is a container of stuff already built
 - Either as standard releases or as GitHub repos
- For Databricks, any SQLRender / WebAPI specific code or JDBC assets are not handled explicitly by Broadsea
 - Code changes should be targeted for WebAPI development so as to become part of standard releases
 - However, if your WebAPI image has that code, Broadsea can run it
 - JDBC files can be mounted (upcoming Broadsea release) to add to the WebAPI if needed
- LDAPS and Databricks SSL needs can be handled via cacerts file
 - Build your cacerts file, then mount it



OHDSI / Broadsea (Public)

< Code Issues 8 Pull requests Discussions Actions Projects Wiki Security Insights Settings

Filters Labels ?

8 Open 51 Closed Author Label Projects

- Bring non-OHDSI images up to date
#69 opened 10 minutes ago by alondhe
- Add LDAP container option
#65 opened 2 days ago by alondhe
- Add service for CDM publishing to Atlas
#59 opened last week by alondhe
- Add services for Achilles, DQD, and Aresindexer
#58 opened last week by alondhe
- Add multi-user HADES support
#56 opened last week by alondhe

Add any questions or issues to the GitHub Repo

OHDSI (Acumenus.io) ▾

INFORMATION

- # welcome-and-rules
- # announcements
- # role-assignments
- # how-to-use-threads

WELCOME CENTER 🙌

- # →-arrivals-and-depart...
- # 🙌-introduce-yourself
- # 🗣️-general-discussion
- # ?-request-a-discord-...

OHDSI SOCIAL MEDIA

- # 📢-social-alerts

OHDSI HELP

- # 📖-implementation 👤+
- # 🛠️-development
- # 🧐-research
- # 📄-cdm-developers
- # 🗣️-vocabulary-users
- # 🌟-bragging-rights

OHDSI VOICE HELP

- 🔊 🗣️-Voice Help Room 1
- 🔊 🗣️-Voice Help Room 2

Ajit #6022 🗣️ 🛠️ ⚙️