

Instructions for access to the Exposome Data Warehouse (EDW)

EDW can be accessed by either loading our PostgreSQL dump file into your private environment or using the EDW API. In this document we will show how to access data in both ways.

Lots of tutorials and further information are available through our github repo:

https://github.com/hms-dbmi/exposomeDW_public

EDW access via PostgreSQL dump file

Data Download

All EDW files including are available as a compressed binary PostgreSQL dump file (edwDump.bak). Note: the file was generated using pg_dump utility specifying the “custom” compression format (-Fc flag).

The file can be downloaded via

Data Dryad

<https://doi.org/10.5061/dryad.fv93qg5>

Amazon S3

<https://s3.amazonaws.com/edwpostgres/edwDump.bak>

Data Restore

Download file into your private server environment that is connected to a PostgreSQL database. Using the pg_restore utility the user can simply use the command

```
pg_restore -Fc -h 'hostname' -p 'port number' -U 'user id' edwDump.bak
```

(replace quoted values with your actual values)

EDW access via API

These instructions will give you step by step instructions for obtaining a JWT authentication token for the API. For further details on how to use the API go to the github repo and look for the API tutorial in the “Jupyter_Notebook_Demos” subdirectory.

Accessing the JWT Token

1. Go to <https://portal.dbmi.hms.harvard.edu>

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Eliot L. Berson Database
Three Clinical Trials of Nutritional Supplements for Retinitis Pigmentosa

NHANES i2b2/tranSMART
A database of human exposomes and phenomes from the US National Health and Nutrition Examination Survey

GRDR i2b2/tranSMART
NIH/NCATS Global Rare Diseases Patient Registry i2b2/tranSMART Data Repository

Exposome Data Warehouse
Unified Database of Environmental Information

2. Click on ‘*Exposome Data Warehouse*’ then click on ‘*Click here for more details*’

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Exposome Data Warehouse

Unified Database of Environmental Information

The Exposome Data Warehouse (EDW) is a unified database of environmental information that enables quick data linkage between geolocated environmental information and individual-level data (ie, from electronic health records). Currently, EDW contains EPA air data, NOAA weather data, and American Community Survey socioeconomic and demographic data.

Please visit https://github.com/hms-dbmi/exposomeDW_public for tutorials and other EDW-related information.

[Click here for more details](#)

3. You will then be redirected to the “Exposome Data Warehouse” front page, there you will click on the “login or register” link.

Exposome Data Warehouse

Unified Database of Environmental Information



[Need help? Contact us!](#)

To request access to this dataset please first [login](#) or [register](#).


Description


The Exposome Data Warehouse (EDW) is a unified database of environmental information that enables quick data linkage between geolocated environmental information and individual-level data (ie, from electronic health records). Currently, EDW contains EPA air data, NOAA weather data, and American Community Survey socioeconomic and demographic data.


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4. You will be redirected to a registration page where you can use sign up using your Google or Facebook login or via an email address. (If you use a Harvard or selected other institutional email address then page will be redirected to your institutional login page).


DEPARTMENT OF BIOMEDICAL INFORMATICS
Login Page



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or






5. Follow the instructions for signing up and then you will come to the landing page below. Here you will verify your email.

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Exposome Data Warehouse

Unified Database of Environmental Information

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To request access to this dataset please complete registration steps below.

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Verify Your Email

Your primary email on record needs to be verified. Please look in your inbox for the verification email or click below to send another one:

5. After you have verified your email, you will log back in and fill out the profile information and then click the update button.

DBMI Portal

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Exposome Data Warehouse

Unified Database of Environmental Information

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To request access to this dataset please complete registration steps below.

Verify Your Email

Complete Your Profile

There are a few required fields in your profile that need to be filled out. Please complete the profile registration form below, specifically the fields marked as required. You can go back and edit these fields any time by visiting your [profile](#) page.

First Name *

First Name

Last Name *

Last Name

Primary Email *

✓ Verified

Alternate Email

Alternate Email

Institution

Institution

Institution Type

None

Professional Title *

Professional Title

Street Address 1

Street Address 1

Street Address 2

Street Address 2

City

City

State

State

Street Address 1

Street Address 1

Street Address 2

Street Address 2

City

City

State

State

Zip

Zip

Country *

United States of America

Phone Number

Phone Number

* Indicates a required field, any other field is optional

Update

Cancel


6. After you have filled out your profile information, you will see a dialog box containing your JWT token. You will use this JWT token in order to access the API.

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Exposome Data Warehouse

Unified Database of Environmental Information

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Using your JWT

Below is your JWT which you can use to authenticate yourself with DBMI APIs. Proceed with caution! Treat this long string as you would a password! It represents your identity and anyone who has it can access the same resources as you. Refer to your project's instructions for specifics on how to use this token.

eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6IjRRTBPVVE0T1RBMTJqWXhOVVE0UUVJM056Z3hNemcwTnprMTJrRkRSREF3TUVRNVJEQkZNUzJ9

7. Once you have your JWT token you can use it in the header of your REST API call e.g. if your token is eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6IjRRTBPVVE0T1RBMTJqWXhOVVE0UUVJM056Z3hNemcwTnprMTJrRkRSREF3TUVRNVJEQkZNUzJ9

then your API call will have an **Authorization** key of the form (see Python code below)

Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6IjRRTBPVVE0T1RBMTJqWXhOVVE0UUVJM056Z3hNemcwTnprMTJrRkRSREF3TUVRNVJEQkZNUzJ9

```
import requests

json_post_payload = {"locations":
    {"zipcode": [{"28202", -1, -1}],
      "county": [{}],
      "tract": [{}],
      "address": [{}],
    },
    "time_range": {
      "start": "2008-01-01 00:00:00",
      "end": "2014-01-01 00:00:00"
    },
    "data_req": {"EPA": [{"5117", "Arithmetic_Mean"}],
      "NOAA": [{"3989", "AvgTemp"}],
      "ACS": [{"110560", "100564", "90563", "80561"}]
    }
}

head={"Authorization": 'Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImt' }

r = requests.post("https://edw.dbmi.hms.harvard.edu/data_query", json=json_post_payload, headers=head)
```