

Article

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Plug and play DATASETS with ObjectScript Package Manager (ZPM)

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With the release of [InterSystems IRIS 2021.2 Preview](#) and all-new [LOAD DATA](#) functionality dataset can be added with [Objectscript Package Manager \(ZPM\)](#)

[Medical Datasets](#) contains following 12 datasets. For dataset tables and data details please visit [ONLINE DEMO](#) by using SuperUser | SYS

ID	Dataset Name	Tables	Licence
1	Synthetic Medical Data	11	Public Domain
2	Health Care Analytics - 1	8	Public Domain
3	Global Suicide Data	7	Public Domain
4	COVID-19 Polls1	7	CC-BY
5	Cancer Rates by U.S. State	2	Public Domain
6	Opioid Overdose Deaths	2	Public Domain
7	Heart Disease Prediction	1	Public Domain
8	Yellowpages medical services dataset	1	Public Domain
9	Hospital ratings	1	Public Domain
10	Heart Failure Prediction	1	(CC BY 4.0)
11	Diabetes Dataset	1	Public Domain
12	Chronic Kidney Disease	1	Public Domain

In order to use any of the above listed dataset we can add in our namespace by using dataset ID, So Let's add Synthetic medical dataset

First of all we need to install dataset-medical package which can be done by using below command:

```
zpm "install dataset-medical"
```

```
USER>zpm "install dataset-medical"

[dataset-medical] Reload START (/usr/irissys/mgr/.modules/USER/dataset-medical/1.0.3/)
[dataset-medical] Reload SUCCESS
[dataset-medical] Module object refreshed.
[dataset-medical] Validate START
[dataset-medical] Validate SUCCESS
[dataset-medical] Compile START
[dataset-medical] Compile SUCCESS
[dataset-medical] Activate START
[dataset-medical] Configure START
[dataset-medical] Configure SUCCESS
[dataset-medical] MakeDeployed START
[dataset-medical] MakeDeployed SUCCESS
[dataset-medical] Activate SUCCESS
```

Now we are ready to import dataset. Dataset can be added or removed either by Terminal or by Web Application

ADDING DATASET FROM TERMINAL

We can add dataset by calling ImportDS function of dc.data.medical.utility class by passing dataset ID from terminal:

```
do ##class(dc.data.medical.utility).ImportDS(1)
```

```
DATASETS>do ##class(dc.data.medical.utility).ImportDS(1)
DATASET : synthetic
Table : dc_data_synthetic.all_prevalences,      LoadedRows=244      DiagID=1
Table : dc_data_synthetic.allergies,           LoadedRows=572      DiagID=2
Table : dc_data_synthetic.careplans,           LoadedRows=12125     DiagID=3
Table : dc_data_synthetic.claims,              LoadedRows=10014     DiagID=4
Table : dc_data_synthetic.conditions,          LoadedRows=7040      DiagID=5
Table : dc_data_synthetic.encounters,          LoadedRows=6233      DiagID=6
Table : dc_data_synthetic.immunizations,       LoadedRows=13189     DiagID=7
Table : dc_data_synthetic.medications,         LoadedRows=6048      DiagID=8
Table : dc_data_synthetic.observations,        LoadedRows=16355     DiagID=9
Table : dc_data_synthetic.patients,            LoadedRows=1462      DiagID=10
Table : dc_data_synthetic.procedures,          LoadedRows=10184     DiagID=11
```

That's it, Our first dataset is created.

Dataset "synthetic" is created with 11 Tables and 83,341 records, which can be confirm by Management Portal

The screenshot shows the InterSystems Management Portal interface. The top navigation bar includes the InterSystems logo, 'Management Portal', and links for Home, About, Help, Contact, and Logout. Below the navigation bar, the system information is displayed: Server 204b41b8acf8, Namespace DATASETS, User SuperUser, Licensed To InterSystems IRIS Community, and Instance IRIS. The main content area is divided into two panels. The left panel, titled 'System > SQL', shows a list of tables under the 'Tables' tab. The tables listed are: dc_data_synthetic.allergies, dc_data_synthetic.all_prevalences, dc_data_synthetic.careplans, dc_data_synthetic.claims, dc_data_synthetic.conditions, dc_data_synthetic.encounters, dc_data_synthetic.immunizations, dc_data_synthetic.medications, dc_data_synthetic.observations, dc_data_synthetic.patients, and dc_data_synthetic.procedures. The right panel, titled 'Wizards > Actions > Open Table', shows the 'Execute Query' tab. A query is displayed: SELECT id, patient, billableperiod, encounter, diagnosis, total FROM dc_data_synthetic.claims. Below the query, the results are shown in a table with 7 columns: id, patient, billableperiod, encounter, diagnosis, and total. The table contains 100 rows of data. The bottom of the page shows the 'Removing Dataset' section.

Use below command to remove particular dataset by passing it's ID

```
do ##class(dc.data.medical.utility).RemoveDS(1)
```

Adding ALL datasets

To install all the datasets pass 999 to ImportDS function

```
do ##class(dc.data.medical.utility).ImportDS(999)
```

Removing ALL datasets

And to remove all the datasets pass 999 to RemoveDS function

```
do ##class(dc.data.medical.utility).RemoveDS(999)
```

ADDING DATASET FROM TERMINAL

Navigate to <http://localhost:52773/csp/datasets/index.csp> and press Install DataSet button



localhost:52773 says

DATASET : synthetic
SUCCESS table : dc_data_synthetic.all_prevalences created and 244 Rows Imported Successfully
SUCCESS table : dc_data_synthetic.allergies created and 572 Rows Imported Successfully
SUCCESS table : dc_data_synthetic.careplans created and 11211 Rows Imported Successfully
SUCCESS table : dc_data_synthetic.claims created and 10014 Rows Imported Successfully
SUCCESS table : dc_data_synthetic.conditions created and 6915 Rows Imported Successfully
SUCCESS table : dc_data_synthetic.encounters created and 6233 Rows Imported Successfully

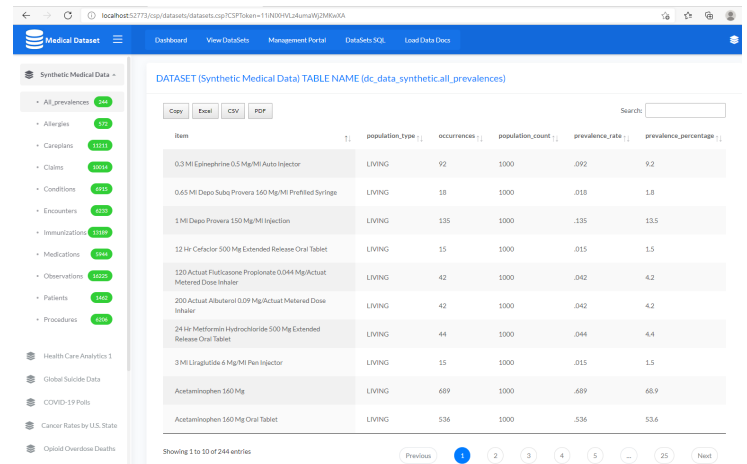
OK

View Data from Web Application

Navigate to <http://localhost:52773/csp/datasets/index.csp> and click any table from sidebar

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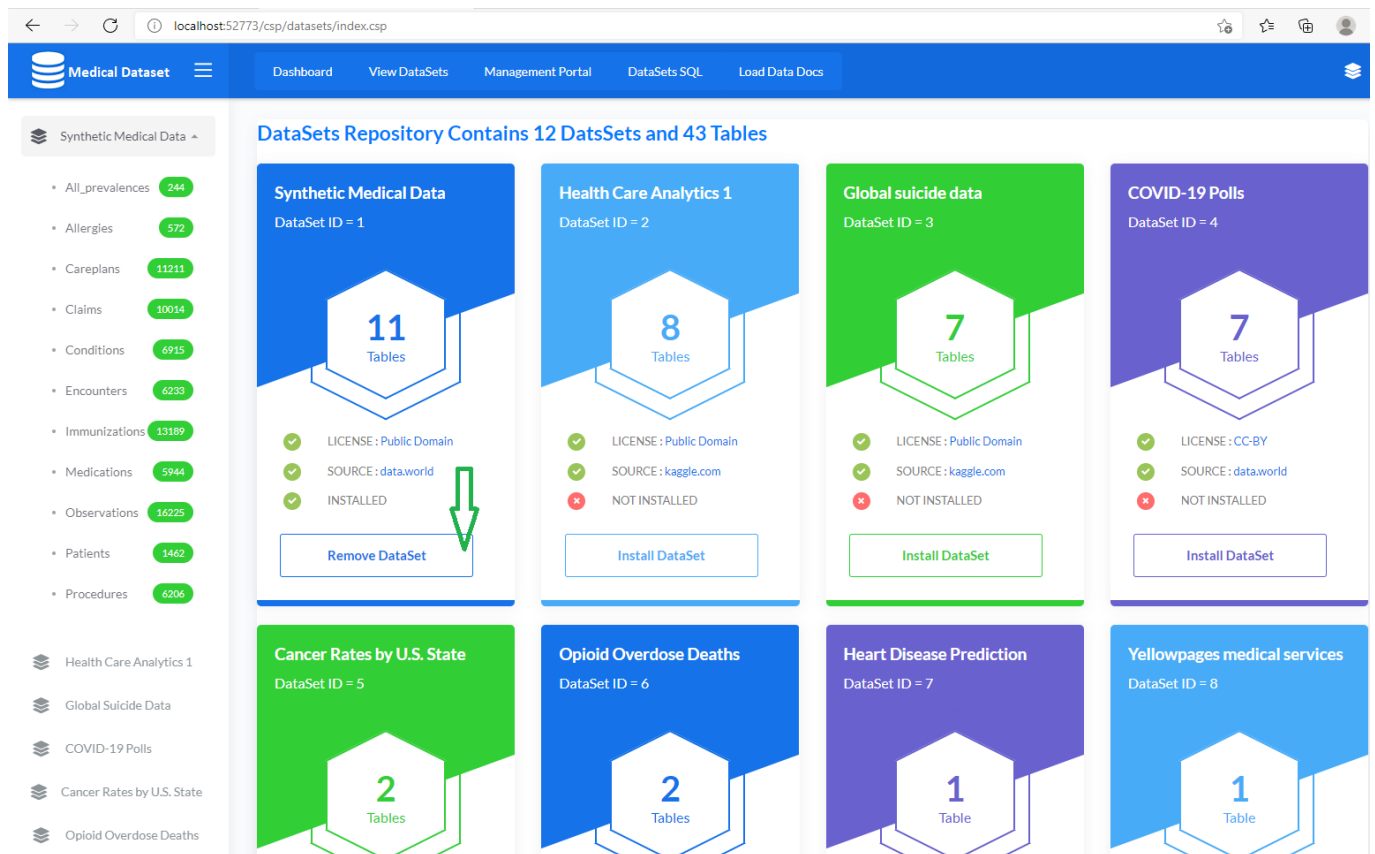


The screenshot shows the 'Medical Dataset' web application. On the left is a sidebar with a tree view of datasets: Synthetic Medical Data (expanded), All_prevalences (244), Allergies (572), Careplans (11211), Claims (10014), Conditions (6915), Encounters (4233), Immunizations (13189), Medications (5944), Observations (16225), Patients (1462), and Procedures (6206). Below these are other datasets: Health Care Analytics 1, Global Suicide Data, COVID-19 Polls, Cancer Rates by U.S. State, and Opioid Overdose Deaths. The main panel displays the 'DATASET (Synthetic Medical Data) TABLE NAME (dc_data_synthetic.all_prevalences)'. It has tabs for 'Data', 'SQL', 'CSV', and 'PDF'. A search bar is at the top right. The table has columns: Item, population_type, occurrences, population_count, prevalence_rate, and prevalence_percentage. It lists various medical items like '0.3 Ml Epinephrine 0.5 Mg/Ml Auto Injector' and 'Acetaminophen 160 Mg'. At the bottom, it says 'Showing 1 to 10 of 244 entries' with pagination controls.

Item	population_type	occurrences	population_count	prevalence_rate	prevalence_percentage
0.3 Ml Epinephrine 0.5 Mg/Ml Auto Injector	LIVING	92	1000	.092	9.2
0.65 Ml Depo Subq Provera 150 Mg/Ml Prefilled Syringe	LIVING	18	1000	.018	1.8
1 Ml Depo Provera 150 Mg/Ml Injection	LIVING	135	1000	.135	13.5
12 Hr Catapres 500 Mg Extended Release Oral Tablet	LIVING	15	1000	.015	1.5
120 Actual Fluticasone Propionate 0.044 Mg/Actual Metered Dose Inhaler	LIVING	42	1000	.042	4.2
200 Actual Albuterol 0.09 Mg/Actual Metered Dose Inhaler	LIVING	42	1000	.042	4.2
24 Hr Metformin Hydrochloride 500 Mg Extended Release Oral Tablet	LIVING	44	1000	.044	4.4
3 Ml Liraglutide 6 Mg/Ml Pen Injector	LIVING	15	1000	.015	1.5
Acetaminophen 160 Mg	LIVING	689	1000	.689	68.9
Acetaminophen 160 Mg Oral Tablet	LIVING	536	1000	.536	53.6

Removing DataSet from Web Application

Navigate to <http://localhost:52773/csp/datasets/index.csp> and press Remove DataSet button



The screenshot shows the 'Medical Dataset' web application's 'DataSets Repository' page. The title is 'DataSets Repository Contains 12 DataSets and 43 Tables'. The left sidebar is the same as in the previous screenshot. The main area displays eight dataset cards in a 2x4 grid. Each card shows the dataset name, ID, number of tables, license, source, and installation status. A green arrow points to the 'Remove DataSet' button on the 'Synthetic Medical Data' card.

Dataset Name	Dataset ID	Tables	License	Source	Installation Status	Action
Synthetic Medical Data	1	11	Public Domain	data.world	Installed	Remove DataSet
Health Care Analytics 1	2	8	Public Domain	kaggle.com	Not Installed	Install DataSet
Global suicide data	3	7	Public Domain	kaggle.com	Not Installed	Install DataSet
COVID-19 Polls	4	7	CC-BY	data.world	Not Installed	Install DataSet
Cancer Rates by U.S. State	5	2				
Opioid Overdose Deaths	6	2				
Heart Disease Prediction	7	1				
Yellowpages medical services	8	1				

Dataset is removed successfully

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The screenshot shows the 'Medical Dataset' application interface. On the left, a sidebar lists various medical data categories with their respective counts: All_prevalences (244), Allergies (572), Careplans (11211), Claims (10014), Conditions (6915), Encounters (6233), Immunizations (13189), Medications (5944), Observations (16225), Patients (1462), and Procedures (6206). The main area displays three dataset cards. The first card, 'Synthetic Medical Data' (DataSet ID = 1), shows 11 Tables, is licensed under Public Domain, sourced from data.world, and is installed. The second card, 'Synthetic Medical Data' (DataSet ID = 2), shows 8 Tables, is licensed under Public Domain, sourced from kaggle.com, and is not installed. The third card, 'Synthetic Medical Data' (DataSet ID = 3), shows 7 Tables, is licensed under Public Domain, sourced from kaggle.com, and is not installed. A confirmation dialog box is overlaid on the interface, titled 'localhost:52773 says', listing the deletion of various tables from the 'dc_data_synthetic' dataset, including all_prevalences, allergies, careplans, claims, conditions, encounters, immunizations, medications, observations, patients, and procedures. The dialog has an 'OK' button.

Thanks

[#Contest](#) [#CSP](#) [#InterSystems Package Manager \(IPM\)](#) [#InterSystems IRIS](#)
[Check the related application on InterSystems Open Exchange](#)

Source

URL: <https://community.intersystems.com/post/plug-and-play-datasets-objectscript-package-manager-zpm>