

Demographic Data Exchange (DDE) Release Notes - November 2025

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Introduction

DDE is an application service responsible for the exchange of patient demographic data using nationally unique health identifiers. Its main goal is to provide unique identification and tracking of patients within and across health facilities.

The document communicates the major features in this release Demographics Data Exchange mechanism in ART and all other EMR systems to allow the exchange of the clients' demographics.

About This Release

This release includes all the features that comprise the Demographics Data Exchange (DDE) service. The primary focus of this release is to update the DDE service in both EMC and PoC sites, with enhancements in automatic error management. Additionally, the release addresses improvements to support the day-to-day operations of the DDE system.

DDE Version: V4.2.2

Compatible Products

This product has been tested on the following platforms:

Ruby 3.2.0

Rails 7.0

MySQL 8.0

Ubuntu Server 22.04 LTS

Upgrades

Automatic error management

Sync status on DDE API

System diagnostics output on DDE API

Features

- The creation of a DDE API which can be accessed at: <http://127.0.0.1:8050>
- Synchronize - shows data synchronization statistics for sites. All activities related to DDE will show under total footprints. To view all synced footprints, press the Synchronize button to sync all activities.
- The addition of the Last Synced feature on the API to show system users the last time the facility synced to the master
- Quick links to the DDE Master dashboard, proxy sidekiq and API Swagger docs
- The API also displays the facility and DDE version
- The DDE API also displays a system diagnostics section, where activities related to syncing and footprints can be tracked.
- Sync Job: this tab displays the sync status of a site. When the sync lock is removed it means the sync job is complete
- Resolving sync configurations: this tab displays sync configurations settings related to authentication & password resets
- For configurations that have failed, an error message will display showing the error and will provide instructions to resolve the error
- Detecting Footprint conflicts: this tab displays activities related to footprints at a particular site/proxy
- Any errors related to footprint settings will be displayed
- In cases where the IP not registered, report to responsible personnel to update metadata
- Footprint will display changes when IP changes

Enhancements

- Introduction of DDE API to track
 - o Synchronization
 - o Footprints

Fixes

- Introduction of DDE API to track
 - o Synchronization
 - o Footprints

Dropped Features

- No dropped features in this release

Known Bugs and Limitations

- Network accessibility is needed to run diagnostics and test synchronization.

General Note

It is recommended to get the latest tags of DDE on a test machine and test the system before deploying the system to the production server, and turning on the DDE functionality at the site. To upgrade to the latest version, make sure the targeted machine has access.

To the: <https://github.com/HISMalawi/Demographics-Data-Exchange> repository and then do the following: Setting up the application:

1. Cloning the system to the machine:

To clone the system, run the following command on your machine.

- `git clone git@github.com:HISMalawi/Demographics-Data-Exchange.git dde4`
NB: the application must be cloned in the APPS folder, where the other POC files are cloned

2. Setting up DDE

I. Enter into the root of your application by typing

- `cd dde4`
- `./setup_dde_proxy_service.sh`

II. Add users to the application:

Application Users:

1 will use EMR-API a to setup the config/application.yml in place the EMR-API the URL, USERNAME and PASSWORD appropriately under DDE: -URL (put DDE URL) – add username and password for all programs that are running on the site (These should be different for every program) 2 -> DDE

III. Run the following command in your terminal replacing the URL with the one configured in the URL in dde config -> Copy the ACCESS_TOKEN to use in b

IV. Run the following command:

- `Sudo sed -i 's/#TMPTIME=0/TMPTIME=0/g' /etc/default/rcS`

3. Updating existing DDE version

- Run `bash bin/dde4_update_script.sh`