

API Integration Guide

NEW YORK STATE DONATE LIFE REGISTRY

NYS Donate Life Registry API Implementation Guide

Donate Life New York State



page 1 of



Department of Health
Donate Life Registry

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Table of Contents

About the New York State Donate Life Registry	3
Purpose of the Registry API	3
Glossary.....	4
Onboarding and First Steps	5
Assistance	5
Key Features	6
Basic Usage Flow	7
Supported Languages.....	7
Authentication	8
Content	9
Using Content	10
Donor Registration Process	10
Troubleshooting	14

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

About the New York State Donate Life Registry

The New York State Donate Life Registry (“the Registry”) is a secure and confidential database of individuals who have documented their authorization to donate organs, eyes, and tissues after death, offering the potential to save or improve countless lives. It is operated by Donate Life New York State, a nonprofit organization dedicated to increasing organ, eye, and tissue donation across the state, under contract with the New York State Department of Health.

The need for organ and tissue donation in New York is urgent. Thousands of residents are currently patients on the national organ transplant waiting list, and hundreds of people die each year while waiting for a donor. On a national scale, 17 individuals lose their lives daily due to the shortage of available organs.

Remarkably, just one organ donor can save up to eight lives and enhance up to 75 more through tissue and corneal donations, highlighting the profound impact of registering as a donor. Partnerships with third-party entities play a crucial role in these efforts by increasing public awareness, improving access to enrolling in the Registry, and inspiring more people to make the lifesaving decision to register as donors.

Purpose of the Registry API

The Donate Life NYS Registry API is a private, server-to-server, RESTful API designed to seamlessly integrate the option to register as an organ and tissue donor into your existing processes. This flexible approach ensures that the opportunity to register can be incorporated in a way that aligns with your workflow and user experience.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Glossary

The following terms are used throughout this documentation. Please take a moment to review their meaning and context:

API

Application Programming Interface, which allows two separate applications to communicate with one another.

Consumer

The organization using the Registry API.

Donate Life NYS

Donate Life New York State, the nonprofit organization operating the New York State Donate Life Registry under contract with the Department of Health.

JSON

Javascript Object Notation, the format used by the Registry API to pass data.

JWT

JSON Web Token, a data packet encryption method used by the Registry API to secure sessions.

NYS DOH / DOH

The New York State Department of Health, the governing body of the New York State Donate Life Registry.

Registry

The New York State Donate Life Registry, a secure and confidential database where individuals document their decision to donate organs, eyes, and tissues after death.

TLS

Transport Layer Security, the secure replacement for SSL, and the protocol used in web browsers to support secure HTTPS connections.

User / End User

The organization's user, whose affirmative decision to register as an organ and tissue donor and personal identifying information is being transmitted to the Registry via API.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Onboarding and First Steps

To integrate the Registry API, follow these steps:

1. Schedule with Donate Life NYS

- Schedule your API implementation by coordinating with Donate Life NYS. Email registry_tech_support@dlnys.org

2. Set Up Consumer Account

- Provide your server IP address(es) to Donate Life NYS for whitelisting to ensure secure access.
- A consumer account will be created for your organization.

3. Receive API Credentials and Documentation

- You will be provided with:
 - i. API consumer credentials
 - ii. Documentation
 - iii. Testing endpoints to facilitate development

4. Begin Development Work

- Use the provided credentials and resources to start implementing the API into your system.

5. Test Your Implementation

- Fully test your API integration using the testing endpoints. Once tested, contact registry_tech_support@dlnys.org to switch off "read-only" mode for your API account. Full end-to-end testing can then be completed in the development environment.

6. Upgrade to Production Status

- When ready, contact Donate Life NYS at registry_tech_support@dlnys.org to schedule a review session so confirm compliance. Following approval, your API credentials will be authorized for production use, enabling you to launch the integration in a live environment.

Assistance

This guide is designed to assist you in coding your implementation of the Registry API. If you encounter any issues or have questions, send a detailed email to registry_tech_support@dlnys.org.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Key Features

1. Secure Access

- API access is restricted to whitelisted servers, ensuring only authorized systems can interact with the Registry.
- All communication requires Transport Layer Security (TLS) to encrypt and secure data transmission.

2. Session-Based Authentication

- Consumer authentication is required for each session, generating a session token for subsequent requests.
- Sessions are secured using JSON Web Tokens (JWT), adding an additional layer of encryption and security.

3. Dynamic Content Delivery Compliant with State Regulations

- The API delivers pre-scripted content that aligns with New York State statutes and Department of Health (DOH)-approved language.
- This ensures compliance with state laws while dynamically providing content updates without requiring hard-coded changes in consumer systems.

4. Streamlined Donor Registration Process

- The API enables seamless integration of donor registration into existing workflows.
- Validation ensures accurate data submission, with errors returned for correction if necessary.
- Consumers are not required to retain information about their user's decision to register as a donor. However, a record identifier is returned after successful registration and may be associated with the user if desired.

5. Language Support

- The API supports multiple languages by specifying the desired locale via the "Accept-Language" HTTP header (default: `en-US`).

6. Developer-Friendly Design and Testing Environment

- Comprehensive documentation is provided, including endpoints, usage instructions, error handling guidelines, and code samples in PHP for guidance and testing purposes.
- A dedicated testing environment allows consumers to fully test their integration before upgrading to production status, ensuring a smooth launch process.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Basic Usage Flow

This structured flow ensures secure, accurate, and compliant donor registration while adhering to statute and New York State-approved guidelines through the following steps:

1. Authenticate Consumer

- Each use of the API requires consumer authentication.
- This authentication generates a session token, which automatically authenticates subsequent requests during the session.

2. Call for Prescribed Content

- The API provides pre-scripted verbiage that aligns with New York State statutes and approved New York State Department of Health (DOH) language.

3. Register End User

- If the end user chooses to register as a donor, their personal information is transmitted to the API for processing.
- The API validates the submitted information:
 - i. If validation fails, a list of errors is returned for correction.
 - ii. If validation succeeds, the end user is successfully registered as a donor, and a confirmation message is returned.

Supported Languages

Code samples are provided for each of the three types of requests you will make to the Registry API—**login**, **get-content**, and **register-donor**—to assist with development and testing. These samples are written in PHP for guidance but are not prescriptive; you can implement the API in any programming language or framework that meets the following requirements:

- Capable of making HTTP requests via **TLS v1.3**.
- Able to receive and process responses in **JSON** format.

The flexibility of the API allows you to tailor your implementation to the specific needs of your application, ensuring compatibility with your existing systems. While PHP code samples are included, they serve only as examples, and your actual implementation may differ based on your preferred language or framework.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Authentication

To interact with the Registry API, a consumer must establish a session by authenticating with their username and password. Authentication is handled via posted form data to the login endpoint.

Key Steps

1. Login

- Send your username (`user`) and password (`pass`) to establish a session to the appropriate login endpoint:
 - **[Testing]** <https://admin.donatelifenys.org/V1/test-get-content?page=registration>
 - **[Production]** <https://admin.donatelifenys.org/V1/get-content?page=registration>
- If authentication fails, a “401 Unauthorized” error will be returned.

2. Session Management

- A successful login will return a session token, which must be included in every subsequent API request via the “x-auth-token” request header.
- Sessions expire after 20 minutes of inactivity. If a session has expired, attempts to use it will result in a “401 Unauthorized” error, requiring a new login to establish a fresh session.

Code Sample (PHP)

```
<?php
$curl = curl_init();
curl_setopt_array($curl, array(
    CURLOPT_URL => '<endpoint url>',
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => '',
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 0,
    CURLOPT_FOLLOWLOCATION => true,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => 'POST',
    CURLOPT_POSTFIELDS => array('user' => '<username>', 'pass' =>
    '<password>'),
));
$response = curl_exec($curl);
if (!empty($response)) {
    $sessionToken = json_decode($response)->{'x-auth-token'} ??
    null;
}
curl_close($curl);
```

3. Subsequent Requests

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

- Pass the `x-auth-token` value from the successful login on all subsequent API requests using the HTTP header: `x-auth-token: <session token>`

Content

All content associated with the registration option and related messaging is provided dynamically to the consumer via the API. None of this content should ever be hard-coded into your application. This approach eliminates the need for future code deployments on the consumer side if any prescribed verbiage changes.

Developer Instructions

- Content is delivered with developer instructions to help implementers understand where and how the content should be used.
- These instructions are strictly for behind-the-scenes reference and should never be displayed to end users.

Locale Context

- The locale context for the requested content must be passed via the `Accept-Language` HTTP header.
- The default locale is `en-US`.
- Contact Donate Life NYS to obtain a list of all supported languages.

Session Token Requirement

- Ensure that the current session token is passed via the `x-auth-token` HTTP header with every content request.

Content Endpoint

Use the following endpoints to retrieve content:

- **[Testing]** https://admin.donatelifenys.org/V1/test-get-content?page=registration_option
- **[Production]** https://admin.donatelifenys.org/V1/get-content?page=registration_option

Code Sample (PHP)

```
<?php
$curl = curl_init();
curl_setopt_array($curl, array(
    CURLOPT_URL => '<endpoint>',
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => '',
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 0,
```

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

```
CURLOPT_FOLLOWLOCATION => true,
CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
CURLOPT_CUSTOMREQUEST => 'POST',
CURLOPT_HTTPHEADER => array(
    'X-Auth-Token: <session token>',
    'Accept-Language: en-US'
),
);
$response = curl_exec($curl);
if (!empty($response)) {
    $content = json_decode($response)->{'content'} ?? null;
}
curl_close($curl);
```

Important Note

- **Do not cache content calls**, as this may result in outdated content being displayed to end users. Always retrieve the latest content before rendering it.

Using Content

The content endpoint will return an array of content for your use.

API Call 1: Login

Consumer system calls the API to establish a session.

API Call 2: Get Content

Consumer system calls the API to retrieve all required display content for registration.

Present Required Donor Registration Question

- Display content located at: [page=registration | contents->prompts->decision_prompt->content](#)

Present Required Decision Options

- Content: [page=registration | contents->prompts->yes_checkbox->content](#)
If the user selects yes_checkbox, proceed to the “Registration Disclosure and Confirmation” step.
- Content: [page=registration | contents->prompts->skip_checkbox->content](#)
If the user selects skip_checkbox, do not submit the registration and end the process.
 - Optionally display content: [Content: page=registration | contents->copy->abort_confirmation->content](#)

Present Optional Registration Disclosure and Confirmation

- Display disclosure content: [page=registration | contents->copy->disclosure->content](#)

Optional Decision Options

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

- [Content: page=registration | contents->prompts->yes button->content](#)
If the user selects agree option (yes_button), proceed with API Call 3 to submit the registration.
- [Content: page=registration | contents->prompts->no button->content](#)
If the user selects disagree option (no_button), do not submit the registration. End the process and optionally display confirmation content:
 - [Content: page=registration | contents->copy->abort confirmation->content](#)

API Call 3: Register Donor

Consumer system calls the API to submit registrant information.

- If success: true, display optional registration confirmation:
[Content: page=registration | contents->copy->registration confirmation->content](#)
- If success: false, display the error message(s) contained in the API response.

Donor Registration Process

The registration process involves three steps:

1. Present the donor registration question and answer buttons to end user (buttons = “yes” and “skip this question”)
2. If end user selects “yes” button, prompt for confirmation of enrollment (buttons = “agree” and “disagree”) prior to submitting identifying information to the Registry.
3. If end user selects “agree,” submit their identifying information to the Registry and display confirmation message.

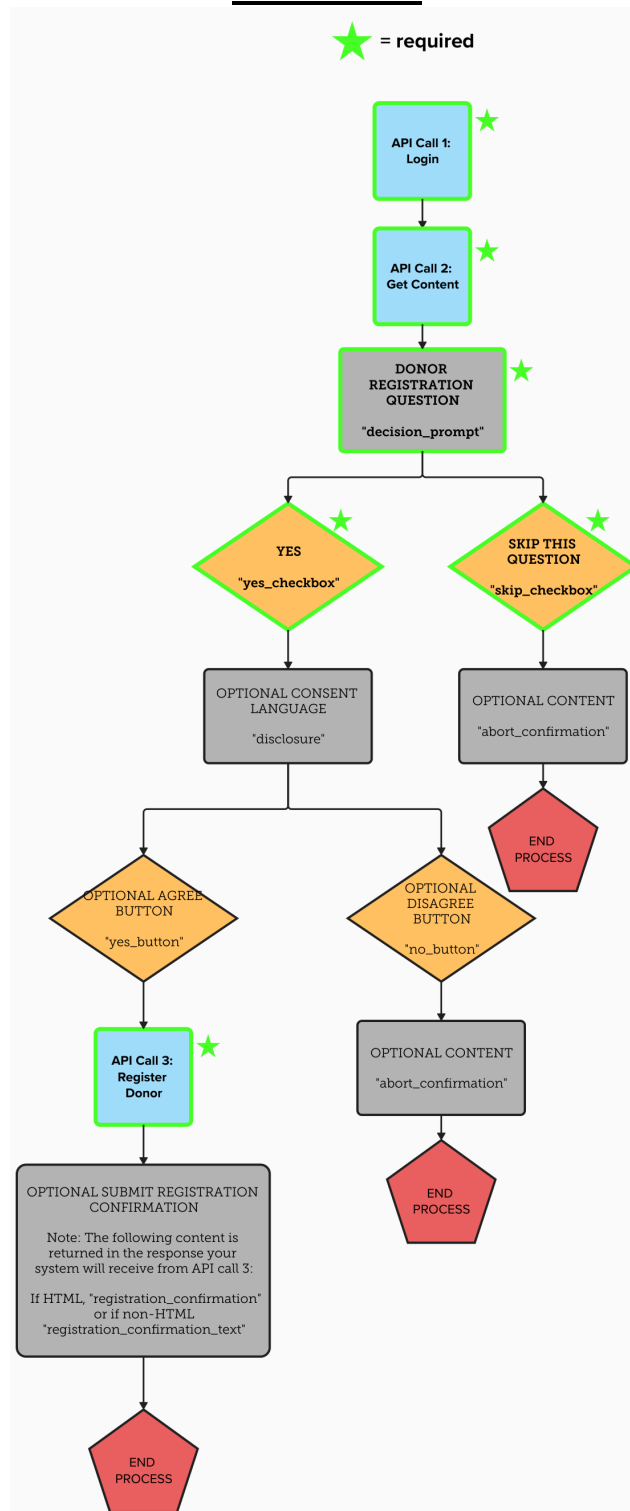
Key Considerations

- **Locale Context:** Pass the locale context via the `accept-language` HTTP header. The default is `en-US`. This setting affects:
 - Content for both the registration option and confirmation steps.
 - Validation errors or messaging from the registration action.
- **Session Token:** Ensure that the current session token is passed via the `x-auth-token` HTTP header with every request.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

FLOWCHART



- [Testing] <https://admin.donatelifenys.org/V1/test-register-donor>
- [Production] <https://admin.donatelifenys.org/V1/register-donor>

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Note: For detailed field descriptions and standards, see Data Dictionary and Guidance located at <https://donatelifenys.org/insurance-plan-resources>.

Code Sample (PHP)

```
<?php
$curl = curl_init();
curl_setopt_array($curl, array(
    CURLOPT_URL => '<endpoint url>',
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => '',
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 0,
    CURLOPT_FOLLOWLOCATION => true,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => 'POST',
    CURLOPT_POSTFIELDS => array('consumer_system_id' =>
'ABCD4321', 'dl_num' => '999999999', 'first_name' => 'Test', 'middle_name'
=> 'T', 'last_name' => 'Testerson', 'suffix' => 'Jr', 'dob' => '2009-02-
24', 'address' => '123 Anystreet Place', 'address_2' => '', 'city' =>
'Parker', 'state' => 'CO', 'zip' => '80134', 'gender' => 'M', 'phone' =>
'970.555.1212', 'email' => 'test@test.com', 'eye_color' =>
'BL', 'height_feet' => '5', 'height_inches' => '10'),
    CURLOPT_HTTPHEADER => array(
        'X-Auth-Token: <session token>',
        'Accept-Language: en-US'
    ),
));
$response = curl_exec($curl);
curl_close($curl);
```

Error Handling

- If there are validation errors in the submitted data:
 - A list of errors will be returned with a success status of "false".
 - Rectify these errors and resubmit the registration call.
- If registration is successful:
 - A "200" response will be returned for production endpoints.
 - A "202" response will be returned for testing endpoints.
- If a "500" error occurs:
 - Contact Donate Life NYS at <support address TBD> for assistance.

NYS Donate Life Registry API Implementation Guide

Donate Life New York State

Troubleshooting

(content pending following pilot implementations)