

TokenFlow - Multi-Service OIDC Testing Tool

Project Overview

TokenFlow is a Python-based CLI tool for automating the testing of multiple OpenID Connect (OIDC) services using a single login session. It launches a real browser via Playwright to capture authorization codes, exchange them for tokens, and retrieve user information.

Getting Started

1. Clone the repository:

```
git clone https://your-org/tokenflow.git
cd tokenflow
```

2. Create and activate a virtual environment:

```
python3 -m venv myenv
source myenv/bin/activate    (Linux/macOS)
myenv\Scripts\activate      (Windows)
```

3. Install dependencies:

```
pip install -r requirements.txt
```

Usage

To test multiple services with one login, pass the configuration as inline JSON strings. Example:

```
python tokenflow.py --output results.csv --json \
'{ "name": "Service A", "auth_url": "<AUTH_URL>", "client_id": "<CLIENT_ID>", "client_secret": "<SECRET>",
"token_url": "<TOKEN_URL>", "redirect_uri": "<REDIRECT_URI>", "userinfo_url": "<USERINFO_URL>" }' \
'{ "name": "Service B", "auth_url": "<AUTH_URL>", "client_id": "<CLIENT_ID>", "client_secret": "<SECRET>",
"token_url": "<TOKEN_URL>", "redirect_uri": "<REDIRECT_URI>", "userinfo_url": "<USERINFO_URL>" }'
```

NOTE: For security, do not share real client secrets in example commands.

CSV Output

Each run generates a CSV file (default: tokenflow_results.csv) with the following columns:

- Service Name

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- Auth Code Captured (Yes/No)
- Token Exchange (Success/Failed)
- UserInfo (email/sub or status)
- Timestamp
- Error (if any)

Notes

- The session is reused between service tests to prevent repeated logins.
- JSON values must be properly escaped in the shell.
- Only services using the authorization code flow are supported.
- Keep secrets and URLs secure when sharing commands or code.

Troubleshooting

- 'invalid_grant': Check that redirect_uri and client_id match the code request.
- Browser doesn't launch: Ensure Playwright is installed (playwright install).
- Output file not found: Check for write permissions and valid paths.