



Enabling global identity
Protecting digital trust

GLEIF Concatenated Files Specification and User Manual

Final

Public
Version 2.4
2017-05-04

Table of Contents

1	About the GLEIF Concatenated Files	4
1.1	What are the GLEIF Concatenated Files?	4
1.2	Who creates the GLEIF Concatenated Files?	4
1.3	What is included in the Concatenated Files?	4
1.4	What is the technical format of the GLEIF Concatenated Files?	5
1.5	What if an LEI Issuer's source file is not technically valid?	5
1.6	How are the GLEIF Concatenated Files created?	5
1.7	How up-to-date are the GLEIF Concatenated Files?	6
1.8	Does GLEIF validate the LEI Issuers' original source files?	7
1.9	What future developments are planned?	7
1.10	Why are GLEIF Concatenated Files produced before 8th June 2015 different?	7
2	How do I download the GLEIF Concatenated Files and the original source files?	8
2.1	Manual download	8
2.2	Automated download	9
2.2.1	File publication	9
2.2.2	File retrieval URLs	9
2.2.3	How can I parse the GLEIF Concatenated Files and the LEI Issuers' original source files?	10
2.3	How can I interpret the GLEIF Concatenated Files data once downloaded?	10
3	Where can I find further information?	11
3.1	Technical support	11
3.1.1	LEI Issuer files	11
3.1.2	Whom should I contact for further questions?	11

Version	2.4
Date of version	2017-05-04
Created by	GLEIF
Approved by	Head of Development and Operations (GLEIF IT)
Confidentiality level	Public

About this Document

This document:

- Describes the GLEIF Concatenated Files.
- Explains how to download and use the Files.

Change History

This section records the history of all changes to this document.

Date	Version	Description of change	Author
2017-05-04	2.4	Level 2 updates	GLEIF
2016-01-27	2.0	Completed first Web version	GLEIF
2016-01-20	1.0	First draft pre-publication	GLEIF

Where changes are made for clarity and reading ease only and no change is made to the meaning or intention of this document, the version number will be increased by 0.1.

Where significant changes are made to this document, the version number will be incremented by 1.0.

1 About the GLEIF Concatenated Files

LEI Issuers – also referred to as Local Operating Units (LOUs) – supply registration, renewal and other services, and act as the primary interface for Legal Entities wishing to obtain an LEI.

They assign LEIs to, and collect information on, Legal Entities, and publish this information daily in original source files, both at their public websites and to GLEIF, for production of the centralized Global LEI Index.

The primary access point to the Global LEI Index is the **complete set of GLEIF Concatenated Files**.

1.1 What are the GLEIF Concatenated Files?

The Global Legal Entity Identifier Foundation (GLEIF) publishes daily updated Concatenated Files. As their name indicates, they consist of a concatenation of all LEIs and related data in the original source files published by all LEI Issuers worldwide, provided in central files, without changes to the source data.

GLEIF offers the unique Concatenated File service free of charge to any interested user, but please take note of the **LEI Data Terms of Use** at www.gleif.org. The GLEIF Concatenated Files are available on the GLEIF **Download** webpage.

1.2 Who creates the GLEIF Concatenated Files?

GLEIF creates the daily Concatenated Files in collaboration with all organizations that issue LEIs (LOUs – Local Operating Units).

Earlier versions of LEI-CDF Concatenated Files were published in cooperation with c-lei.org, a project supported by GS1. For more information about c-lei.org, please visit www.c-lei.org.

1.3 What is included in the Concatenated Files?

GLEIF Concatenated Files' content includes:

- All current Legal Entity Identifiers (LEIs) globally;
- All related LEI Reference Data (LE-RD), including:
 - Identification data for each Legal Entity itself;
 - Relationships to other Legal Entities (where applicable);
 - Reasons for lack of relationship reporting (where applicable).



1.4 What is the technical format of the GLEIF Concatenated Files?

All GLEIF Concatenated Files are provided as an XML data file within a ZIP compressed file.

Each type of information is provided by the LEI Issuer according to its own Common Data File (CDF) format, an XML Schema and content specification, and made available in its own Concatenated File:

CDF format	Content
LEI-CDF	Legal Entity identification (LEI code, Legal Entity information)
RR-CDF	Relationships between Legal Entities
RepEx	Reporting Exceptions (reasons for non-reporting)

Please see the GLEIF **Common Data File Formats** page for general and technical details of each CDF format:

1.5 What if an LEI Issuer's source file is not technically valid?

Please note that for technical reasons, each type of GLEIF Concatenated File is compliant with the latest version of the relevant Common Data File format.

This means that original source files which were not compliant with the Common Data File format on a given day are excluded from the GLEIF Concatenated Files and, if available, an earlier compliant version of the source file is used in the GLEIF Concatenated File of that day.

Details on the status of each source file are available via the "Show Details" link provided with each GLEIF Concatenated File on the GLEIF **Download** webpage.

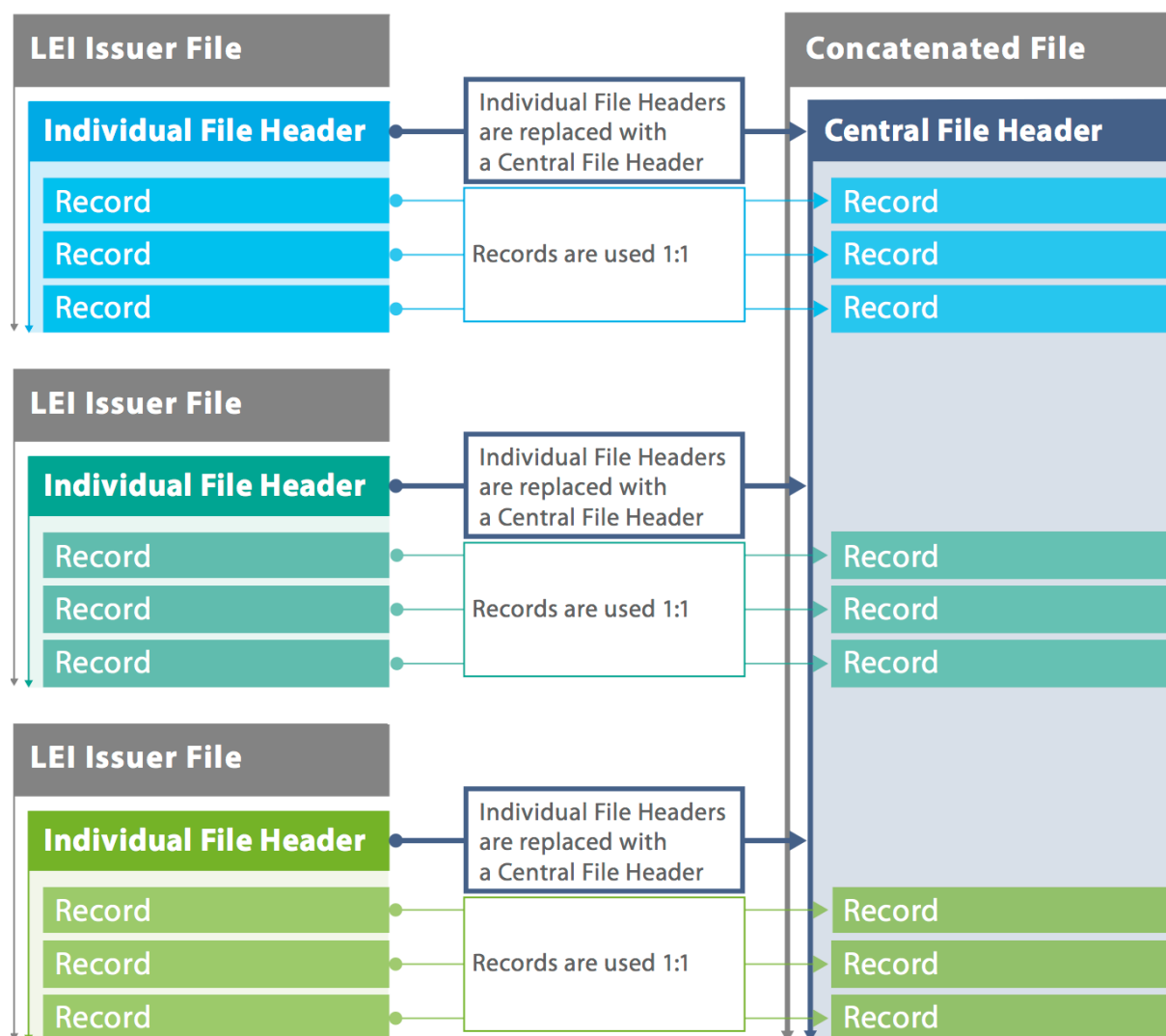
1.6 How are the GLEIF Concatenated Files created?

Daily, the LEI Issuers' original source files are concatenated by GLEIF. This process:

1. Removes the individual file headers.
2. Concatenates all currently available records.
3. Adds a central GLEIF file header.

The following diagram below illustrates this process.

Please note **the process is the same for all file types**.



Each GLEIF Concatenated File provides details on the LEI Issuers' original source files.

For more information on the structure of the LEI Data Records please see the Common Data File format specification available at www.gleif.org.

1.7 How up-to-date are the GLEIF Concatenated Files?

GLEIF makes all of the latest Concatenated Files available daily from 12:00 UTC+0.

The **Original Sources** page provides a listing of all contributing LEI Issuers as well as information on the availability and schema validation status of the LEI Issuers' data.

Please note: only technically valid (XML schema valid) source files are used in the Concatenated Files. This accounts for any older LEI Issuer records: these are the records from the most recent valid XML file provided by the respective LEI Issuer, and are used as fallbacks, should a valid file be temporarily unavailable.

The details link associated with each GLEIF Concatenated File listed on the **Download** page identifies the LEI Issuers' original source files included in that specific GLEIF Concatenated File download.

1.8 Does GLEIF validate the LEI Issuers' original source files?

The content of the original LEI Issuer source files is not validated by GLEIF. They are only checked technically to verify compliance with the XML Schema of the Common Data File format.

To view the detailed list of source files contained in each GLEIF Concatenated File, follow the "Show Details" link available with the individual GLEIF Concatenated Files posted on the GLEIF website's Download page.

This list indicates, among other things, if a source file included in a Concatenated File published prior to 8th June 2015 is not fully compliant with the relevant Common Data File format.

Content issues should be communicated to the managing LEI Issuer associated with the data in question.

1.9 What future developments are planned?

GLEIF continually enhances the scope of its service to include data quality assurance, user search capability, and other file access options.

Please see the GLEIF website for announcements of all new developments.

1.10 Why are GLEIF Concatenated Files produced before 8th June 2015 different?

Earlier versions of LEI-CDF Concatenated Files are published in cooperation with c-lei.org, a project supported by GS1.

For more information about c-lei.org, please visit c-lei.org.

URLs of LEI-CDF Concatenated Files posted prior to 8th June 2015 are in the following format:

`https://www.gleif.org/lei-files/<YYYYMMDD>/clei/<YYYYMMDD>-clei-file.zip`

The LEI-CDF Concatenated Files published prior to 8th June 2015 are well-formed XML files. However, due to the fact that several of the original source files received from LEI Issuers prior to 8th June 2015 were not yet fully compliant with the relevant CDF XML schema, neither are the GLEIF Concatenated Files posted before that date.

2 How do I download the GLEIF Concatenated Files and the original source files?

Please note that the Concatenated Files are provided as XML, which needs specialized tools for display and analysis.

To download a set of current LEI Records in Excel or CSV format, suitable for use in spreadsheet applications, please use the LEI Search tool.

2.1 Manual download

To download the GLEIF Concatenated Files manually:

1. Go to the Concatenated Files Download page and select the desired CDF format.
2. Click either
 1. the most recent GLEIF Concatenated File (highlighted at the top of the page) or
 2. any of the previous GLEIF Concatenated Files.
3. If you would like information on the original source files, click the details link and you will be redirected to a page containing these files.
4. Then click the download link to obtain the file you have chosen.

Please note that GLEIF offers all files as ZIP files.

Once downloaded, you can unzip the files with the tool of your choice (depending on your operating system this may happen automatically) and access the XML file in the Common Data File format.

The GLEIF Concatenated Files use XML formats which cannot be directly opened with e.g. Excel or Access. Often a specialized tool is needed. GLEIF does not provide tool or application support; instead we recommend consulting your IT team for any complex tasks.

The GLEIF Concatenated Files use XML formats which cannot be directly opened with e.g. Excel or Access. Often a specialized tool is needed. GLEIF does not provide tool or application support; instead we recommend consulting your IT team for any complex tasks.

2.2 Automated download

To download the GLEIF Concatenated Files automatically, you can use a computer program to request the files, e.g. cURL, etc.

2.2.1 File publication

GLEIF's daily Concatenated File is available from 12:00 UTC+00 (UTC-Z) at the Download page.

Please ensure that your download process executes at or shortly after 12:00 UTC-Z to be certain of a reliable process and up-to-date LEIs.

2.2.2 File retrieval URLs

The date in the URLs for the GLEIF Concatenated Files refers to the date of the concatenation.

2.2.2.1 LEI-CDF V2, RR-CDF and Reporting Exception Files

The URLs for LEI-CDF V2, RR-CDF and Reporting Exception Files follow this pattern.

```
https://leidata.gleif.org/api/v1/concatenated-files/{filetype}/{date}/zip
```

Where the parameters in {brackets} (do not include the brackets in the URL!) are as follows:

- date is the day's calendar date in YYYYMMDD format.
- filetype is one of the following:
 - lei2 – LEI-CDF V2 format.
 - rr – Relationship Record (RR) CDF format.
 - repex – Reporting Exception format.

Example: <https://leidata.gleif.org/api/v1/concatenated-files/lei2/20170501/zip>

2.2.2.2 LEI-CDF V1 Files

As of 8th June 2015, URLs of LEI-CDF V1 Files are in the following format:

```
https://www.gleif.org/lei-files/<YYYYMMDD>/GLEIF/<YYYYMMDD>-GLEIFconcatenated-file.zip
```

Before 8th June 2015, URLs of Concatenated Files are in the following format:

```
https://www.gleif.org/lei-files/<YYYYMMDD>/clei/<YYYYMMDD>-clei-file.zip
```

2.2.3 How can I parse the GLEIF Concatenated Files and the LEI Issuers' original source files?

All files provided since 8th June 2015 are valid XML files complying with the relevant Common Data File (CDF) format.

Any XML parser can be used to incorporate the content into a given environment.

Please note that the GLEIF Concatenated Files are not a database and so there is no documentation detailing tables, relationships between tables or database validation rules.

The GLEIF Concatenated File and the CDF formats are also not intended as database design guidance, though they could be used to inform such a process. GLEIF does not provide tool support; instead we recommend consulting your IT team for any complex tasks.

2.3 How can I interpret the GLEIF Concatenated Files data once downloaded?

To understand the definitions of the codes in LEI data fields, please see the detailed technical specifications (human readable documentation) for the LEI Common Data File formats.

Software applications may require the XML Schema Definition (XSD) file to process the Concatenated Files. The latest versions of the technical specifications and XSDs for all CDF formats can be found www.gleif.org.

LEI Issuers are also required to create and update CDF files according to the State Transition and Validation Rules (ST/VR) for the relevant CDF format. These data management rules are provided by GLEIF in addition to the CDF XML Schemas, and LEI Issuers must follow them in order to achieve high data quality scores, but they are not automatically enforced.

Please find the ST/VR at the GLEIF Common Data File Formats pages on www.gleif.org.

3 Where can I find further information?

3.1 Technical support

3.1.1 LEI Issuer files

If you have any questions regarding the original source files, please contact the respective LEI Issuer via its website.

Contact details for all LEI Issuers can be found on the Original Sources page at www.gleif.org.

3.1.2 Whom should I contact for further questions?

If you have any questions regarding the GLEIF Concatenated Files downloaded from the GLEIF Website, please contact GLEIF directly at: **info@gleif.org**.