

eInvoiceShuttle Manual (Installation)

Version	1.0.1.0
Date	October 2026
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1. Introduction

Please note the disclaimer. You can find it here: [disclaimer_en.pdf](#)

The **eInvoiceShuttle** accesses existing **GnuCash** databases to automatically generate compliant electronic invoices from the invoices stored there in the **ZUGFeRD** (PDF/A-3 with embedded XML) and **XRechnung** (XML) formats.

Currently, a CLI version (Command Line Interface) is available: `eInvoiceShuttle.Cli.exe`.

Supported database formats:

Data is accessed directly through the GnuCash database schema. The following formats are supported:

- ☒ **SQLite**
- ☒ **PostgreSQL**
- ☒ **MySQL**
- ☐ **XML**

Note: The GnuCash XML format is neither currently nor in the future supported.

Paths and Configuration

- **Program files:** The software is provided as a ZIP archive. Extract it to any location.
- **Configuration file:** `config/appsettings.json`
- **Default output directory:** `C:\ProgramData\eInvoiceShuttle.Invoices` (can be changed in the configuration file)
- **Log file:** `C:\ProgramData\eInvoiceShuttle.Cli\eInvoiceShuttle.Cli.log`

2. Installation and Requirements

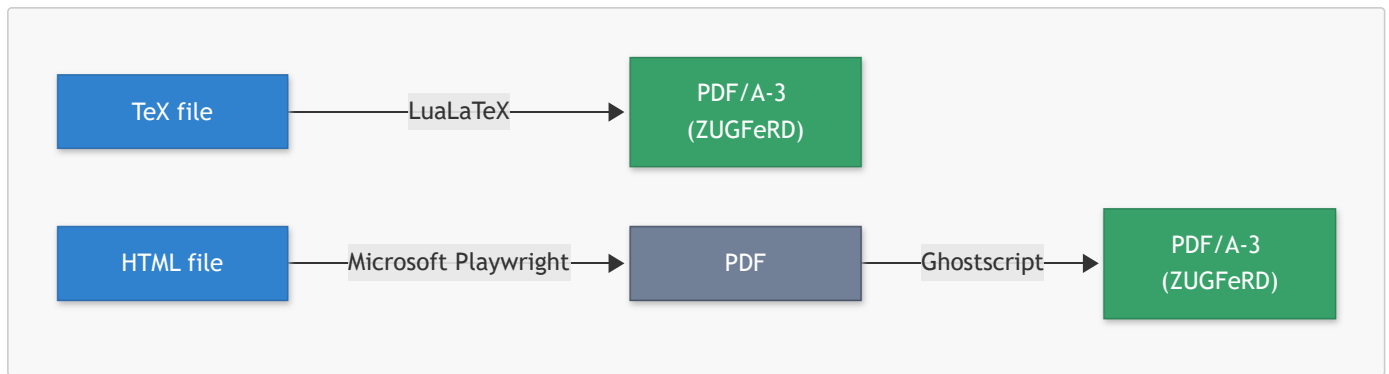
Two processing methods are available for creating the visual PDF representation (required for the ZUGFeRD format):

1. **TeX** with **LuaLaTeX** (recommended)
2. **HTML** with **Microsoft Playwright** and **Ghostscript**

TeX offers advantages in terms of both installation and PDF generation speed and quality.

Many features, such as background images, images for invoice items, and links, are currently implemented only in the TeX template.

HTML would support these features as well; however, they would have to be implemented accordingly in the template.



If you only want to generate invoices in the **XRechnung format (pure XML)** and do not need a visual PDF output, no additional software is required apart from the **.NET 8 Runtime**.

2.1 .NET 8 Runtime

The **.NET 8 Runtime** is required to run the application.

If the runtime is missing on the target system, the following message is displayed when the program starts:

```
Download the .NET runtime:  
https://aka.ms/dotnet-core-applaunch?missing\_runtime=true&arch=x64&rid=win-x64&os=win10&apphost\_version=8.0.28
```

Follow the link, download the runtime for Windows (x64), and install it.

2.2 Installing TeX (LuaLaTeX)

The software has been successfully tested with **MiKTeX** and **TeX Live**:

- **MiKTeX**: Can automatically download required packages the first time they are needed. The installation is lightweight and completes quickly.
Recommendation: After installation, use the MiKTeX Console to update all packages.
- **TeX Live**: Requires approximately 10 GB of disk space, but includes all commonly used packages by default.

Troubleshooting TeX templates:

If an error occurs while processing a TeX file, the temporary `.tex` file and the associated `.log` files are retained in the directory. Double-click the `.tex` file to open it in the **TeXworks** editor, select **LuaLaTeX** as the compiler, and run the typesetting process manually to analyze detailed error messages.

2.3 Installing Microsoft Playwright and Ghostscript

Microsoft Playwright and **Ghostscript** are required for processing HTML templates.

2.3.1 Microsoft Playwright

Playwright provides a headless Chromium browser. Playwright generates standard PDFs from HTML files, but does **not natively generate PDF/A-3 files**.

For the initial installation, switch to the `bin\cli` subdirectory of your `elnvoiceShuttle` installation and run the following command in PowerShell:

```
powershell -ExecutionPolicy Bypass -File .\playwright.ps1 install
```

2.3.2 Ghostscript

Ghostscript (version 10 or newer) is required for post-processing and converting the Playwright PDFs to **PDF/A-3** format.

1. Download Ghostscript and run the installer.

2. The installer normally adds Ghostscript to the system PATH environment variable automatically.
 3. If connection problems occur, you can specify the path to `gswin64c.exe` manually in `config/appsettings.json`.
-

3. Examples and Validation

3.1 Running the Examples

The `Examples` subdirectory contains batch files for testing (`extension=Tex/Html`):

- `Run<extension>Examples.cmd`: ZUGFeRD and XRechnung files + validation
- `Run<extension>ExamplesNoValidation.cmd`: ZUGFeRD and XRechnung files without validation (no Java required)
- `Run<extension>ExamplesInvoiceOnly.cmd`: Generates only the PDF invoices without an embedded digital invoice
- `RunAddressCheck.cmd` (important for digital invoices)

The following file is used as the test database: `bin\cli\examples\GnuCash\SKR03_Music.gnucash`

Log output can be found here:

<C:/ProgramData/eInvoiceShuttle.Cli/eInvoiceShuttle.Cli.log>

If everything works correctly, you will find the invoices here:

<C:/ProgramData/eInvoiceShuttle.Invoices/tex/>

3.2 Validating the Digital Invoices

The *eInvoiceShuttle* includes the **KoSIT Validator**, version 1.6.3.

Requirement: Automatic validation requires a **Java Runtime Environment (JRE 11 or newer)** to be installed and available in the system PATH.

To enable automatic validation whenever an invoice is generated, adjust the option in `config/appsettings.json`:

```
{
  "Validation": {
    // Enables KoSIT validation for generated XML files
    "CreateValidationReport": true
  }
}
```

Alternatively, generated XML and PDF files can also be checked using online services such as [PortInvoice](#).