

# Unlock the power of Unit4 APIs



## Introduction to APIs

### What's an API?

An Application Programming Interface (API) links various software apps, setting rules for smooth communication. It's like a language that lets external systems share data without tapping directly into the database. This not only promotes modularity but also simplifies the whole development process.

### Why do APIs matter?

They're the secret sauce for fast and efficient app creation! Developers get to use pre-built components, speeding up the development cycle. Plus, it makes applications scalable and flexible, adapting easily to changing needs.

### REST is key!

Representational State Transfer (REST) is a smart software style that creates a simple and consistent interface over the web. It's all about uniquely addressable resources and a user-friendly design for smooth interaction.

### Key benefits

- **Interoperability:** Our APIs seamlessly connect Unit4 ERP with external applications, fostering collaboration and enabling data and functionality sharing.
- **Efficiency boost:** Unit4 APIs automate tasks, reducing manual effort and enhancing operational efficiency, leading to smoother processes with fewer errors.
- **Standardised solutions:** Due to their flexibility and ease of use, our APIs support the development of standardized integrations, adapting effortlessly to evolving technology.
- **Data access simplified:** APIs provide smooth data access, allowing developers to create integrations that synchronise and exchange data from various platforms without direct database access.
- **Enhanced user experience:** Leverage APIs to create feature-rich applications! Integration with APIs enhances overall functionality, providing users with a superior experience.

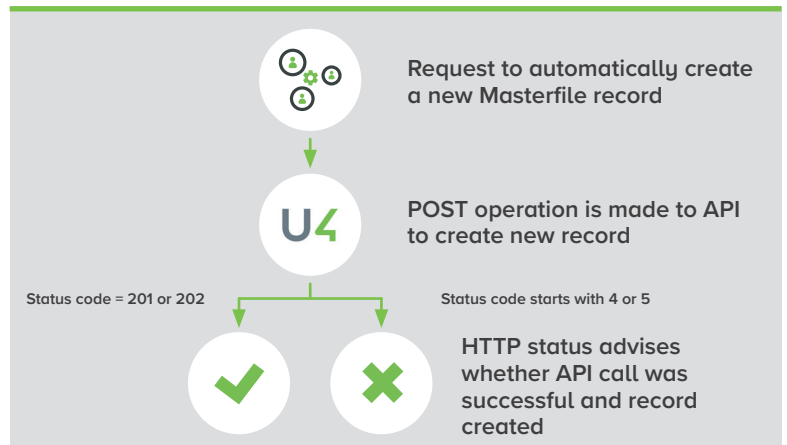
Overall, APIs are the backbone of modern software development, offering a suite of benefits that enhance efficiency, foster innovation, and deliver improved user experiences.

## API use case examples

### Use case 1: Aligning data efficiently

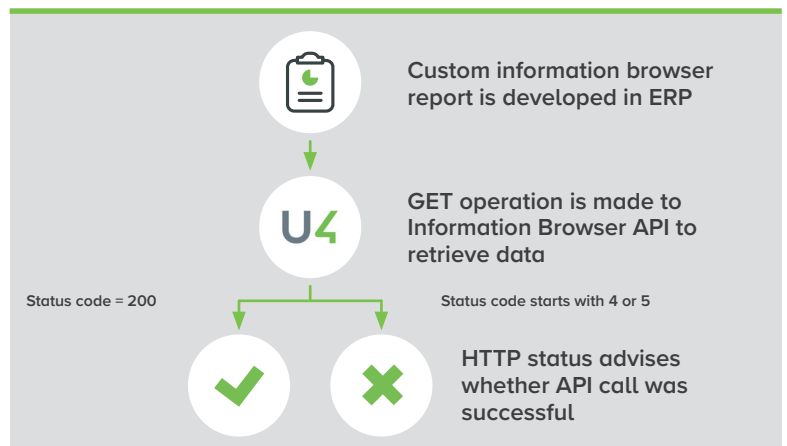
**Scenario:** The customer aims to synchronize master file records from an external system with the data stored in Unit4 ERP in real time. This synchronization encompasses various entities such as suppliers, customers, employees, or users.

Leveraging our APIs ensures a seamless alignment of data between both systems, guaranteeing real-time synchronization and consistency.



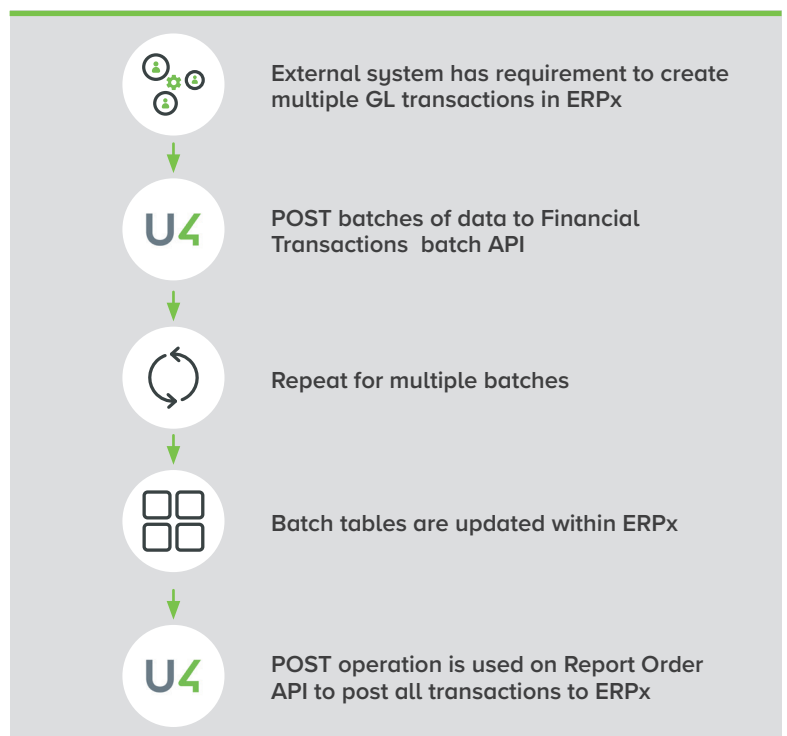
### Use case 2: Providing transaction information to an external system

**Scenario:** Details of transactions completed within Unit4 ERP must be conveyed to an external system. The nature of the data to be generated is tailored to meet the unique business requirements of each customer.



### Use case 3: Updating the General Ledger with external transactions

**Scenario:** Every day, it is necessary to generate general ledger transactions within Unit4 ERPx based on activities completed in an external system.



## Ready to begin working with APIs? Here's a simple guide:

- **Step 1: Enable swagger** - Swagger serves as a comprehensive directory listing of all our APIs, conveniently accessible through a web browser. It streamlines the design, documentation, and utilization of RESTful web services by establishing a standardized format for describing APIs.
- **Step 2: Grant user access to APIs** - Users can be assigned access to either all APIs or a specific subset based on their requirements.
- **Step 3: Verify user master file configuration** - Ensure the correct setup of the User Master file. This step is crucial for validating authentication and confirming that users can successfully submit API requests. Has the company ID field been properly populated?
- **Step 4: Explore and test Unit4 APIs** - In a non-production environment, experiment with our APIs. Test them using either basic or bearer authentication, depending on the applicable authentication method. This hands-on exploration will help you become familiar with the functionalities before deploying in a live environment.

## More detailed steps:

### How to enable swagger

Swagger is a directory listing of all our APIs, which are represented within a browser. It facilitates the design, documentation, and consumption of RESTful web services by providing a standard for describing APIs.

- Unit4 Cloud customers should raise a request to the Cloud team via Community4U
- Unit4 on premise customers' access can be managed in the Management Console. (Instructions below)
  - Go to > **Features/Web Applications/Default Website/Business World/web-api**
  - Select the following check boxes
    - **Enable Swagger**
    - **Enable Swagger UI**
  - For your Swagger URL go to > **Features/Web Applications/Default Web Site/BusinessWorld/Web-API/Protocol**

### Granting access to APIs within ERP

#### To provide access to selected API

- Open **Public Access** (menu item XAG005) in web client.
  - In the **Menu Items** section, navigate to desired endpoint.
  - In **roles and Users** section, select appropriate user/role and move to **Access** section.
  - Make sure that the **(R)** Read, and **(U)** Update permissions are set (Update permission allows Add, Patch, Put and Delete operations).
  - Click **Save**.

#### To provide access to Objects/Query API

- Open **Object Access** (menu item XAG002) in web client.
  - Go to the appropriate item in Menu Items and select relevant object.
  - In **Roles and Users** section, select appropriate user/role and move to **Access** section.
  - Click **Save**

## APIs you can start using now

### 1. Object API:

The Object API type simplifies the retrieval of information about various entities (objects) within the system. It offers detailed insights into a specific object and its related counterparts. The Object API relies on an organizational structure known as the Object Model, which defines different components of Unit4 ERP, such as customers and contact information.

**Note:** The Object API type allows only the read (GET) operation.

#### Query Arguments (Parameters):

Each API endpoint manages the following standard query arguments:

**Select:** Utilized for vertical filtering of the returned data—determining which data fields should be included.

**Filter:** Employed for horizontal filtering of the returned data—specifying how the data in these fields should be filtered.

**OrderBy:** Used to sort the returned data.

**Offset:** Allows skipping a certain number of objects.

**Limit:** Enables limiting the number of returned objects.

### 2. Information Browser Reports API:

The Information Browser API facilitates the retrieval of custom data tailored to your specific business needs from Unit4 ERP. This API relies on the creation of a user-defined information browser report within the ERP, automatically accessible through the Information Browser API.

## Key service limitations

API call limit	300 per minute (per machine to machine client)
Inbound and Outbound API limit	5mb limit per API call, up to a maximum of 350mb every 5 minutes, both inbound and outbound (per M2M client)
Maximum Document Archive file size	50MB
Maximum API call timeout	120 seconds