

## Apparo Fast Edit

Excel data import via email



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## 1 Definition

The Excel Email Import feature enables you to import data that is stored in Excel files (CSV, XLS, XLSX) from email attachments.

That means the user can send an email with **Excel files in attachment and the data of these Excel files will be imported automatically in your relational databases.**

The user is getting automatically answer-emails that are informing the user about the progress or data quality issues.

All activities can be logged in database table, the emails and attachments can be stored physically on the server.

Of course security is an important topic too.

## 2 Benefits at a glance

It represents the easiest and fastest way to import data from Excel

**No browser needed & no Excel plugins :** And no other additional software, you will only need Excel and an email client

**No login needed:** Saves time and also means, beside from your Fast Edit license you will need no additional BI (e.g. Cognos, SAP BO, SAS, QlikView) license

**No trainings needed:** Users are already familiar with Excel and emails

**No time wasted:** No more waiting for the import to be finished

**Quality and security:** The email import is using the same data quality checks as the standard excel import and has some additional security settings like white lists for email server and sender and many more.

### 3 Example

#### 3.1 Use Case

A big company wants to collect the monthly turnover figures.

100 branches will send their data once a month.

To minimize the effort the data collection shall be done by sending an email with an Excel file in attachment.

All incoming emails and attachments shall be stored and all import attempts logged.

The import shall be secured by restricted sender addresses and a keyword.

This guide shows all necessary steps to setup the “Email Import Business Case” (EIBC).

It contains all definitions for the import.

Explanations concerning our example are marked in text with: **Example:**

#### 3.2 How users experience this feature

For the user this feature will be very comfortable:

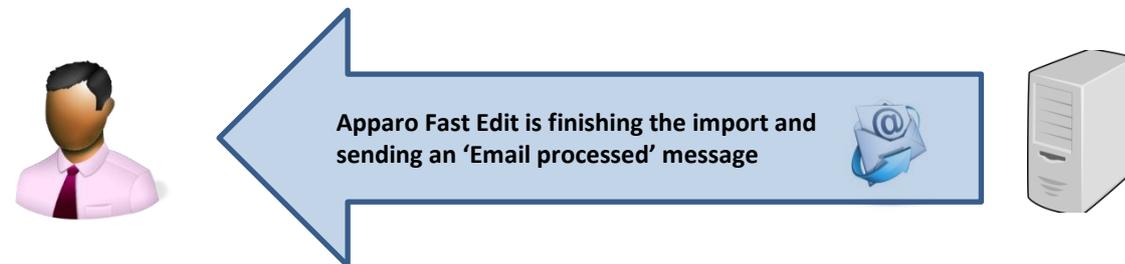
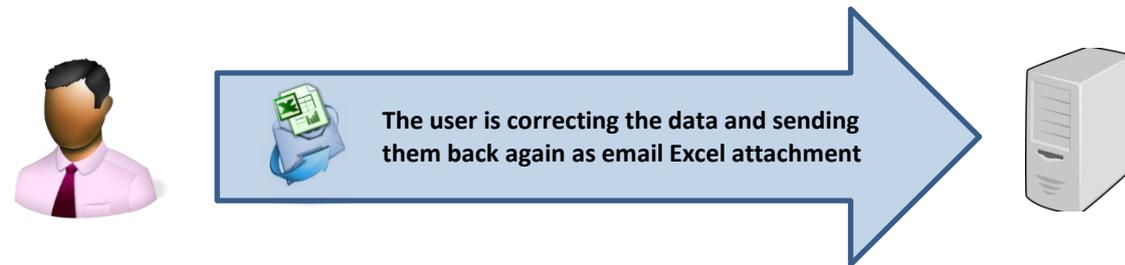
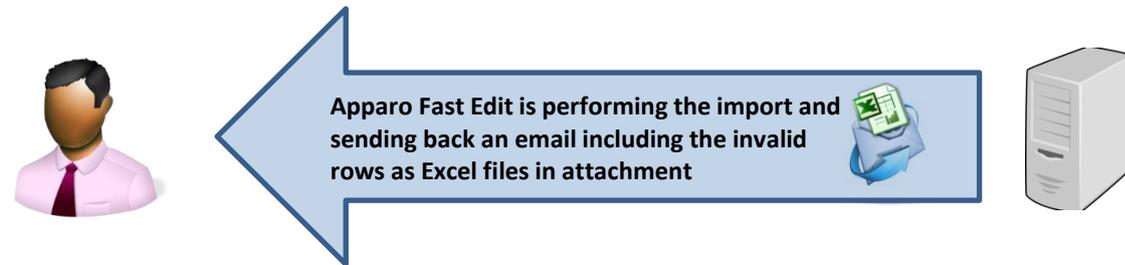
The user needs no additional software, except the two, the users are most familiar with: Excel and the email client.

He is using Excel to add or change data and sends the file to a given email address.

He will get a confirmation that the email arrived and when it is processed (optional).

In case of errors he will get a response email with a description what was wrong.

In case of data errors he will get an Excel file with all erroneous data rows. He can update the data and send them back to import the corrected data.



## 4 Email import Business Case

For the setup we will need a pre-defined email connection and at least one database connection, used for the Business Case that will perform the import.

These Business Cases are also containing all definitions for securing the data quality.

The Business Cases must have activated the Excel file import feature.

### 4.1 Creating a new Business Case of Type 'Email Import'

When clicking on New Business Case in the Business Case list the following selection list will appear:

Apparo Fast Edit
Administrator Demo

Please select type of Business Case you want to create now

	Business Case type	Business Case type description
	<b>Table</b>	A table Business Case is showing many data rows on the same page. The user can filter the data, edit, import from Excel, export to Excel and so on.
	<b>Single</b>	A single Business Case is showing just one data row only.
	<b>Set</b>	A grouping of multiple Business Cases (table/cross table/single) for more comfortable usage. You can define global filters that are filtering all Business Cases automatically too.
	<b>Email import</b>	Importing Excel data directly by email - send Excel sheets using email attachments and Apparo Fast Edit will import the Excel data directly into the database including file uploads. No web browser is necessary, just an email.
	<b>Email</b>	An eMail Business Case is a definition of an email text including usage behavior and can be used in another Business Cases of type 'table' or 'single' only. In these Business Cases it is possible to define buttons that can use this eMail Business Case.

← CANCEL

**Example:** Click on Email Import to create a new 'Email Import Business Case'

#### 4.1.1 New Business Case - Main Settings

The main settings require the following settings:

- **Identifier:** The short name of the Business Case (must be unique)
- **Business Case Name:** This name will appear as name when we link the Business Case to the portal
- **Email connection:** The email connection for sending and receiving emails
- **Internal description:** Optional. For documentation purposes only.

**Apparo Fast Edit**

### Email Import Business Case (EIBC) - Main settings

Identifier / Short name  \*

Business Case name  \*

Email connection  ▼

Enabled

Notes

NEXT
CANCEL

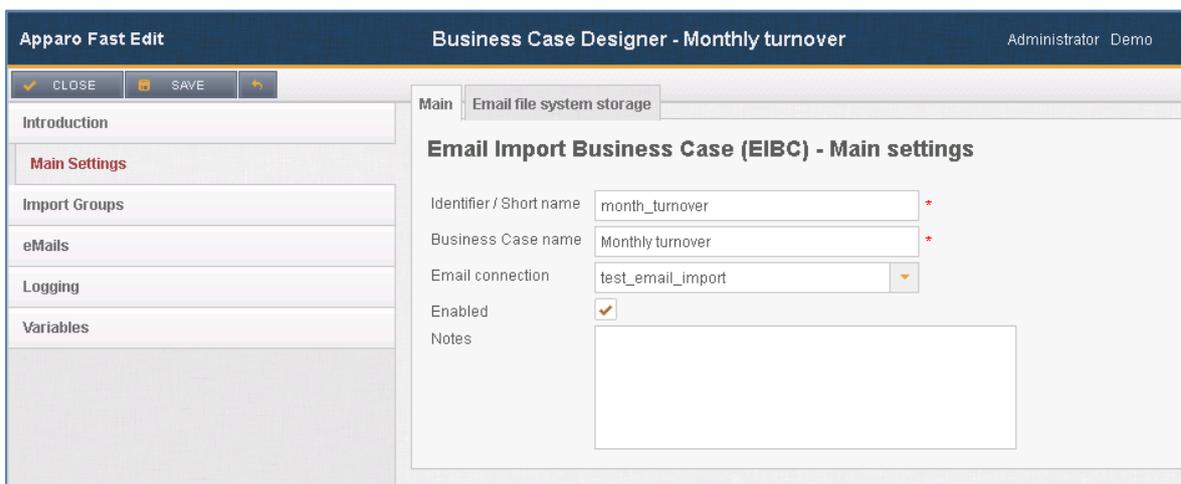
**Example:** Fill all necessary fields and click 'Next' to create the Business Case

## 4.2 Overview of all possible settings

Once the Business Case is created we will see the following overview.

Here you can save and close the Business Case and click through the tabs of the settings:

- **Introduction:** Contains usage examples and explanations
- **Main Settings:** Contains the main settings and the server path for storing emails and attachments
- **Importing Groups:** Contains the import groups, the detailed settings how shall be imported
- **eMails:** Here you can define the text of a failure email, for the case that no import group is matching
- **Logging:** Contains the logging settings, details like user name can be mapped here to a database column
- **Variables:** Contains predefined variables and you can create own JavaScript variables



The screenshot shows the 'Apparo Fast Edit' interface for 'Business Case Designer - Monthly turnover'. The user is logged in as 'Administrator Demo'. The interface includes a navigation sidebar on the left with tabs for 'Introduction', 'Main Settings' (selected), 'Import Groups', 'eMails', 'Logging', and 'Variables'. At the top, there are 'CLOSE' and 'SAVE' buttons. The main content area is titled 'Email Import Business Case (EIBC) - Main settings' and contains the following fields:

- Identifier / Short name:  \*
- Business Case name:  \*
- Email connection:  ▼
- Enabled:
- Notes:

### 4.3 Main Settings

This tab contains, beside from the main settings, the path for storing emails and attachments physically on the server.



email file system storage

### 4.4 Importing Groups

An import group contains the definitions what attachments are expected and what Business Case shall perform the import. It also contains the security settings, log settings and the response email texts.

**Example:** When opening this tab the first time there is no defined Import Group and we have to add one by clicking on the button 'Add New Import Group'



Adding a new import group

## 4.5 Importing group settings

### 4.5.1 Main group settings

It contains the import group name (unique) and an optional description text. You can enable or disable the import group here.

Apparo Fast Edit
Business Case Designer - Monthly turnover

### Email import group settings

Main group settings

Business Cases

Email texts

Security

Import group name  \*

Description

Enabled

Error handling strategy  ▼

Error list file format  ▼

✓ OK

↶ CANCEL

#### 4.5.2 Business Cases

Contain the mapping to all Business Cases that are defined to perform the import. When an email from a valid sender arrives, Apparo Fast Edit automatically analyses the structure of the attachments and comparing the structure with the defined import groups.

**Example:**

For our examples we need to create a new mapping with the 'Add New Business Case' button. Select the pre-defined Business Case from the dropdown list.

Apparo Fast Edit Business Case Designer - Monthly turnover Administrator Demo

**Email import settings for table Business Case**

Table Business Case: Table\_BC\_for\_import

Notes: [Text Area]

ADD NEW FILE ATTACHMENT

**Email attachment file list to be read in following order**

Order number	Change order	File name pattern	Description
At the moment this import group has no file attachment definitions.			

OK CANCEL

#### 4.5.2.1 Add new attachment

You need to define at least one email attachment for every defined importing Business Case.

**Example:** For our example we will need only one attachment.

**Email file attachment settings - Excel file**

Basic settings
Advanced Excel document data constraints

**!** Please note, that only the first sheet of an excel file will be imported.

File name pattern  \*

Description

Min. and max. occurrences  -  \*

Starting row  \*

Language  ▼

#### Creating a new file attachment

The following properties are expected:

- **File name pattern:** Defines the allowed file extension (\*.excel allows all Excel files: .xls, .xlsx, .csv)
- **Description:** For the internal documentation
- **Starting row:** For the case the contains a header in row 1, we start the import in row 2
- **Min and Max occurrences:** The minimum should be at least 1 – the user gets an error email if the attachment contains less attachments than expected
- **Language:** Important for language sensitive data types e.g. date

**Example:** Our Excel document contains no header and we start the import in row 1

#### 4.5.2.2 Advanced Excel document data constraints

This feature is optional:

Here you can define the expected data column types, this feature allows Apparo Fast Edit to better distinguish similar Excel file attachments.

**Example:**

For our example we do not define any column types, this is not needed when importing only one Excel file.

Email file attachment settings - Excel file

Basic settings
Advanced Excel document data constraints

**Expected row and column counts**

Number of data columns

Minimum row count

Maximum row count

**Expected data column types**

This functionality is not supported for CSV files.

Column name (eg. A, B or AA)

Column type  ▼

Short description

ADD COLUMN TYPE

Column name (eg. A, B or AA)	Column type	Short description	Actions
No column definitions found			

Expected data column types

### 4.5.3 Email texts

Contain the bodies of different auto response emails.  
Optional. When empty, no email will be sent.

There different kinds of response emails:

- **‘Matching email import group found’**: Sent when email received
- **‘Confirmation email’**: Sent when confirmation by user is necessary
- **‘Security constraints not met’**: Sender does not have the required rights for the import
- **‘Email processing cancelled because of error’**: Sent in case of data errors and the import is set to ‘Cancel the import in case of errors’
- **‘Errors occurred, but import was performed’**: Sent when the import is finished with errors
- **‘Email successfully imported’**
- **‘Limited access prevented email processing’**: The feature ‘limited access’ is activated and prevents the import
- **‘Error list’**: Email with file attachment containing all erroneous rows

#### Example:

For our example we enter a text for the ‘Matching email import group found’, the ‘Error list’ and the ‘Email successfully imported’ response email.

The user automatically receives an ‘Matching email import group found’, the ‘Email successfully imported’ message and in error case a list of all errors.

Apparo Fast Edit		Business Case Designer - Monthly turnover		Administrator Demo				
<b>Email import group settings</b>								
<table border="1"> <tr> <td>Main group settings</td> <td>Business Cases</td> <td>Email texts</td> <td>Security</td> </tr> </table>					Main group settings	Business Cases	Email texts	Security
Main group settings	Business Cases	Email texts	Security					
<b>Matching email import group found</b>								
Email subject	[Data Import] <%ORIG_EMAIL_SUBJECT%> / Ticket <%IMPORT_TICKET_ID%> / Info - email received							
Email body	<p>This is an automatically generated email by Apparo Fast Edit. Ticket number: &lt;%IMPORT_TICKET_ID%&gt;</p> <p>Data structure of your email's attachments is correct. They are going to be imported now. You will receive additional emails informing you about the import progress.</p>							
<b>Email successfully imported</b>								
Email subject	[Data Import] <%ORIG_EMAIL_SUBJECT%> / Ticket <%IMPORT_TICKET_ID%> / Success - all files from your email have been imported							
Email body	<p>This is an automatically generated email by Apparo Fast Edit. Ticket number: &lt;%IMPORT_TICKET_ID%&gt;</p> <p>Your email attachments were imported completely successfully. The import is finished now.</p>							

Auto response email texts

#### 4.5.4 Security

The email import can be secured:

- by limiting the allowed email senders (as list of email addresses)
- by limiting the email senders based on a security group:
  - the user account including email address must be stored in an MS Active Directory system
- by using a text keyword that must be delivered in the subject or body of the email
- by enabling a confirmation email (an automated email is returned to the sender, which has to be confirmed within a defined timeframe)
- by a list of trusted email servers (only emails of listed servers are accepted)

All emails can be encrypted using SSL

The general access can be restricted by using the limited access feature in the tab 'Security':

- **No limitations:** Default value, no restrictions
- **Limited for all:** Nobody can use this import group
- **Limited for variable value:** Not useable if a variable return 'true' – e.g. a variable returns true during the time period when the database is performing maintenance tasks

**Example:**

In our example we limited the allowed sender addresses and defined that the keyword 'monthly figures' must be written in the email.

The screenshot shows the 'Apparo Fast Edit Business Case Designer - Monthly turnover' window. The 'Email import group settings' dialog is open, with the 'Security' tab selected. The 'Allowed email sender addresses' field contains the placeholder '<%sender\_list%>'. The 'Security keywords' field contains the placeholder '<%keyword\_list%>'. The 'Email confirmation required' checkbox is unchecked. The 'Confirmation reply must come within' field is set to 'minutes'. The 'Authorized security groups' field is empty. The 'Business Case limited access' section has three radio buttons: 'No limitation (default)' (selected), 'Limited for all', and 'Limited for variable value'.

## 4.6 eMails

It contains the general error message for the case that no matching import group could be found to perform the import.

This can have different causes:

- Erroneous setup of import groups
- Erroneous attachments (e.g. file does not match the file import template)
- The import group can be temporary disabled by the administrator
- disabled by a variable (e.g. a time controlled variable to avoid issues during a maintenance period)

**Example:** We setup up a short message to inform the user what is wrong. The most likely cause will be a wrong file (wrong template or format).

Apparo Fast Edit		Business Case Designer - email_import		Administrator Demo	
<input type="checkbox"/> CLOSE <input type="checkbox"/> SAVE <input type="checkbox"/>					
Introduction		<b>eMails</b> <b>No matching import group found for email</b> Email subject: Do-not-reply Email body: No import group was found for your email and therefore it was not processed.			
Main Settings					
Import Groups					
<b>eMails</b>					
Logging					
Variables					

General error message

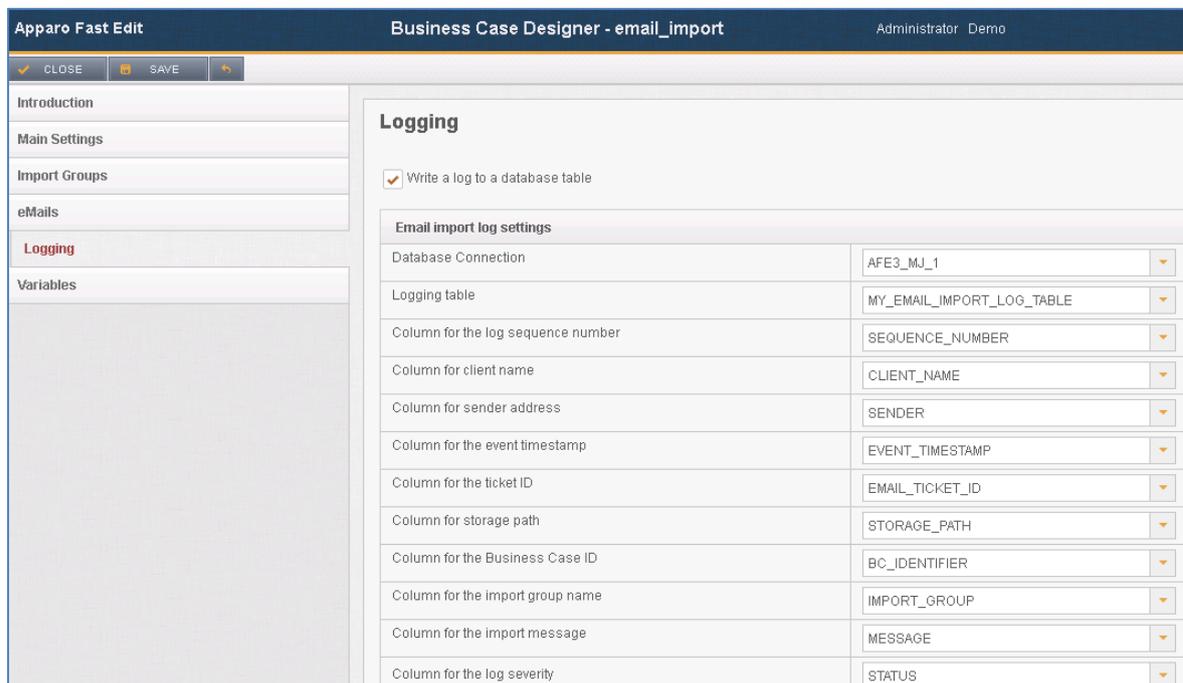
## 4.7 Logging

All events can be logged into an own database table.

In order to log all possible values the table will need the following columns:

- **Column for client name:** What client was used for the import
- **Column for sender address:** What sender address tried to import
- **Column for event timestamp:** Timestamp
- **Column for ticket ID:** Ticket ID, unique ID for the import event
- **Column for storage path:** Where is the email and attachment stored
- **Column for Business Case ID:** What Business Case performed the import
- **Column for importing group name:** What import group performed the import
- **Column for the import message:** Plain text with error message
- **Column for the log severity:** Can be warning, error, info or debug
- **Column for the message code:** A number representing the message

**Example:** We want to store all information and have to set all values.



**Apparo Fast Edit** Business Case Designer - email\_import Administrator Demo

✓ CLOSE SAVE ↶

**Logging**

Write a log to a database table

Email import log settings	
Database Connection	AFE3_MJ_1
Logging table	MY_EMAIL_IMPORT_LOG_TABLE
Column for the log sequence number	SEQUENCE_NUMBER
Column for client name	CLIENT_NAME
Column for sender address	SENDER
Column for the event timestamp	EVENT_TIMESTAMP
Column for the ticket ID	EMAIL_TICKET_ID
Column for storage path	STORAGE_PATH
Column for the Business Case ID	BC_IDENTIFIER
Column for the import group name	IMPORT_GROUP
Column for the import message	MESSAGE
Column for the log severity	STATUS

Mapping of the database table based log

## 4.8 Variables

Allows to create own JavaScript variables.  
Hint: JavaScript variables can perform SQL too.

There is a list with pre-defined variables, ready to use.

Apparo Fast Edit Business Case Designer - email\_import Administrator Demo

✓ CLOSE SAVE ↶

Introduction  
Main Settings  
Import Groups  
eMails  
Logging  
**Variables**

### User defined variables

➕ ADD NEW VARIABLE ✖ DELETE SELECTED

#### User variables

<input type="checkbox"/>	Variable name	Variable type
<input type="checkbox"/>	> <%testvar%>	Script variable

#### Internal variables

##### Internal variables ready for use

Variable name	Variable description
<%AFE_HOME_DIR%>	Folder on the server which contains AFE settings
<%BC_NAME%>	Name of currently opened Business Case
<%SERVER_NAME%>	Name of server where Apparo Fast Edit is running
<%CURRENT_DATE%>	Current date and time
<%DATE%>	Current date
<%TIMESTAMP%>	Current date and time
<%TIME_MS%>	The number of milliseconds since 1.1.1970 (UNIX timestamp)

## 5 Summary

After setting up all necessary steps we are ready to import the files via email attachment.

Further definitions can be made in the Business Cases that are designed to perform the import.

**Example:**

Extended use case:

The monthly figures are checked by a controller as part of a workflow. He has questions to some of the figures and returns them with comments to the sender.

The sender is correcting or commenting the figures and sends them again via email.

In this case the importing Business Case must allow the update of existing data and should have enabled Auditing or the History feature to secure the data changes.