

End-to-end tests for electronic invoices, including eBill

PostFinance 

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1 Introduction

For e-bill tests, PostFinance offers the customer test environment (KI), which always has the same functional status as the productive environment (PROD), except just before releases. A new release is installed on the customer test environment approximately two weeks before production.

For data to be successfully transmitted to eBill, recipient IDs set up specifically for this purpose must be used. For more information on this, see section 4.3.

These instructions describe which preconditions invoice issuers must meet, especially for tests with SIX eBill, and which configurations are important for PostFinance so that end-to-end eBill tests are possible in the customer test environment.

Important: end-to-end-tests with eBill never contain direct access to the SIX eBill platform, or an affiliated e-banking application.

2 Preconditions

2.1 Configuration for customer integration

If you wish to carry out tests, you must register with the e-bill helpdesk in advance so that we can configure you on the customer test environment.

2.2 PF login for the invoicing portal (eIP)

You can log in to the invoicing portal **via PF login**. If you have an **e-finance-login**, you can use it. **Otherwise**, you must first set up a personal login. To do this, you will need an e-mail address, a smartphone with an authenticator app installed (e.g. Google Authenticator).

You can create the login either via the production environment or the customer test environment. The same login is then used for both environments.

URL eIP PROD: <https://eInvoicing.postfinance.ch>

URL eIP KI: <https://eInvoicing-ki.postfinance.ch>

The screenshot shows the PostFinance eInvoicing portal. At the top left is the PostFinance logo. To its right is the text 'eInvoicing' and further right is a link for 'Contact and Support'. Below this is a header 'Send and receive e-invoices'. The main content area is divided into two columns. The left column is titled 'Login with e-finance' and contains the text 'Log in to e-finance and access the invoicing portal directly.' followed by a yellow 'Next' button. Below this is the section 'Login without e-finance' which includes input fields for 'E-mail address' and 'Password', a 'Reset password >' link, and another yellow 'Next' button. The right column is titled 'Create login without e-finance' and contains the text 'To create a login without e-finance, you need an e-mail address and a smartphone with an authentication app. If you have not yet installed an authentication app on your smartphone, you will be offered a choice of apps to download during the following process.' followed by a red-bordered button labeled 'Create login >'.

3 eInvoicing platform

3.1 Initial login

Logging in to the eInvoicing portal uses PF login, i.e. either via e-finance login or the login created with an e-mail address, password and authenticator as shown in section 2.

PostFinance eInvoicing [Contact and Support](#)

Send and receive e-invoices

Login with e-finance

Log in to e-finance and access the eInvoicing portal directly.

[Next](#)

Login without e-finance

E-mail address

Password

[Reset password >](#)

[Next](#)

Create login without e-finance

To create a login without e-finance, you need an e-mail address and a smartphone with an authentication app. If you have not yet installed an authentication app on your smartphone, you will be offered a choice of apps to download during the following process.

[Create login >](#)

Depending on which URL you have selected, you will either be taken to the production environment or the customer test environment:

URL eIP PROD: <https://eInvoicing.postfinance.ch>

URL eIP KI: <https://eInvoicing-ki.postfinance.ch>

If you have logged in to the customer test environment, you can see this in the bar at the top after logging in.

PostFinance eInvoicing - Test system

When you log in, the system will verify whether the user you are using in your selected environment (production or customer test environment) is already assigned to an e-bill contract. If this is not the case, the following page will appear:

User could not be matched with an e-invoicing agreement

What would you like to do?

Our company already uses PostFinance e-invoicing.

I would like to migrate my data from the business interface to the eInvoicing portal.

I would like access to an existing company on the eInvoicing portal.
You will need your company's ID number or the exact company name as stated during your initial registration. If you do not know these details, please contact your administrator beforehand.

Our company does not use PostFinance e-invoicing yet.

I would like to re-register our company.

I want access to a company that has been migrated from the Paynet system to PostFinance.
You will need your company's ID number or the exact company name as stated in the Paynet system.

[Next](#)

3.2 Existing BillerID/PayerID

If you have already registered a BillerID or PayerID for your company, do NOT register a new company, and instead request access to the existing one (shown in red above). For tests in the customer test environment, please make sure beforehand that your ID is configured in the environment. Please note: Option 4, i.e. access to a company migrated from Paynet, is the same function as Option 2.

If several IDs are found for the same company, the following notification will appear:

Company name *

[Redacted]

Several possible companies were found. Please contact [eBill Help](#).

In this instance, you will need to discuss what to do next with the e-bill helpdesk.

3.3 New customer

If your company is not registered as an invoice issuer (BillerID) or invoice recipient (Payer ID), your company can be registered as a new one (Option 3, highlighted in yellow).

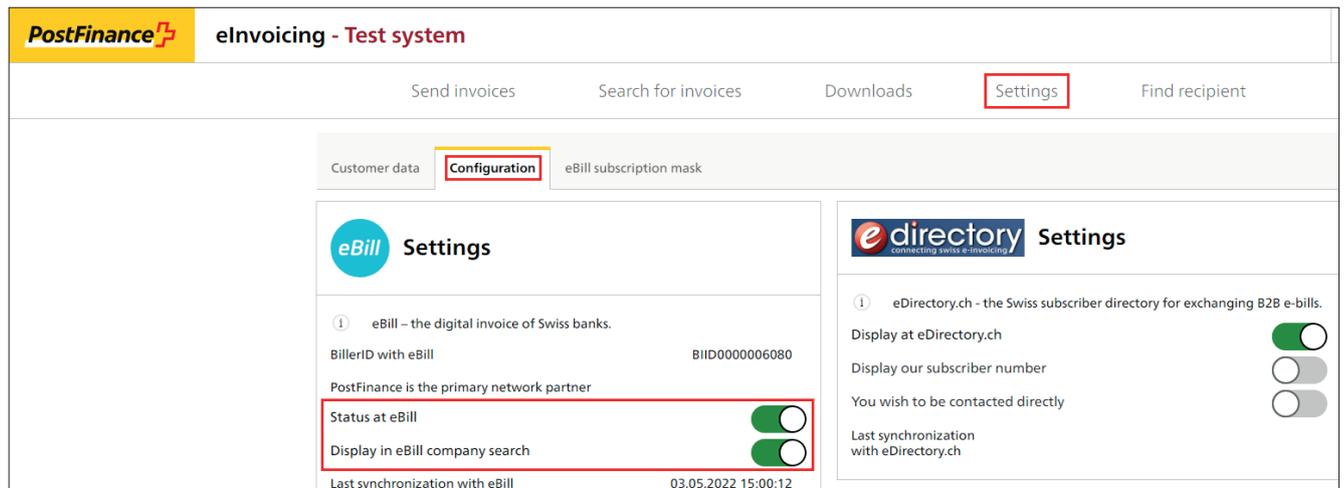
Ideally, your company identification (company ID no.) should be used to register the company. But you can also register using the company name. If possible, the company name you enter should be as close as possible to the name that appears in the commercial register.

4 Test cases and procedures

4.1 Preconditions

To conduct tests with eBill, eBill must first be activated in the customer test environment at SIX eBill. This requires the following settings, which can only be applied in the eLP if PostFinance is the primary network partner.

- The eBill status must be active.
- For tests relating to registrations/deregistrations, the eBill company search must also be active.



Synchronization with eBill occurs after activation (approx. 30 minutes). After that point, the date/time of the most recent synchronization will be visible in the eBill settings tile. The tests can then begin.

4.2 Receive and process registrations/deregistrations from eBill customers

As a rule, tests for registrations/deregistrations can be conducted in the production environment and in the customer test environment. The advantage of performing the tests directly in production is that the settings do not have to be reconfigured in production afterwards.

As long as the settings are not definitive, we recommend deactivating "Display in eBill company search" in production. This will prevent the registration form from being displayed in the eBill portal. You can also take the following steps if you have deactivated "Display in eBill company search", or the eBill status is deactivated.

If you wish to conduct the customer tests independently of ongoing operations, you must use the customer test environment. In doing so, bear in mind that, once the tests have been successfully completed, the same configurations must be entered in the production environment. The customer test environment settings cannot be transferred to the production environment.

4.2.1 Registration form configuration

eBill subscription mask [Reset](#) [Edit](#)

Configure and personalize the eBill subscription mask for your customers. This mask appears when a customer adds your company in the eBill portal to his invoice issuers.

Preview in: English for Private customers

Robert Schneider SA
Ruelle du Lac 177, 2503 Biel/Bienne

Subscribe at Robert Schneider SA to receive future invoices via eBill.

Hier erscheint die Zusatzinformation auf EN

You are subscribing with the following data:

Maria Bernasconi
Testgasse 4
8001 Zurich
maria.bernasconi@test.ch

Date of birth

Reference Number

Delivery of subscription and cancellation data [Edit](#)

Preparation Collective message	Delivery format CSV File
Delivery channel invoicing Portal	

[Download sample file](#)

Using the “Edit” function, you can configure additional information, additional fields and the relevant descriptions yourself. Additional fields are additional information that is required to better identify your customers. You can find more details in the section “Standard eBill registration screens” of the e-bill manual. In the example mentioned above, the “Contract number” is defined as an additional field. Once stored, the registration form data is transferred to eBill with the next synchronization. The synchronization occurs every 30 minutes.

In the section below, you can use the “Edit” function to configure the way that registration/deregistration data is delivered. Here you can select whether you would like the data to be delivered in CSV format (CSV V2.0) or in XML format (CRM-XML V2.0). You can also select the delivery channel and processing method you would like.

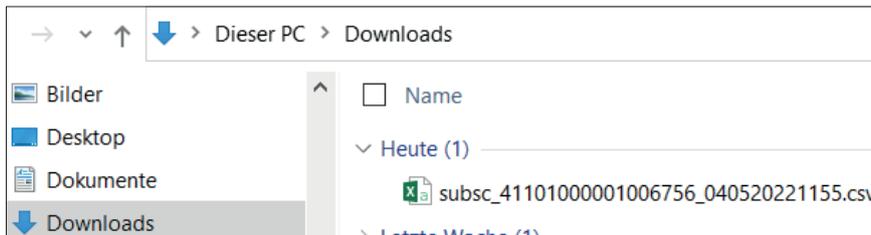
Create a sample file for registrations/deregistrations

For complete end-to-end functionality that is exactly as it is in the real world in production, all the parties involved would be needed. These are:

1. The e-banking customer with access to their e-banking account
2. The bank that offers e-banking and is affiliated with SIX eBill
3. SIX eBill infrastructure
4. The invoice issuer's primary network partner
5. Invoice issuers

Seeing as it is not possible to make all the partners needed available in the customer test environment in their entirety (esp. 1 and 2), PostFinance has set up a function in the eInvoicing portal to create a sample file.

If you have configured the registration form in addition to the delivery method, you can download a sample file. The file is generated in the set delivery format (CSV or XML) and in any additional fields defined in the registration form.



PLEASE NOTE: You must save the CSV file locally and then open it with → Editor by right-clicking → on the mouse (or using a different text processor). If you open the CSV file with Excel (by double-clicking), the incorrect BillerID and RecipientID will be displayed.

For the example shown in section 4.2.1, the CSV file in the editor looks as follows:

```
*subsc_41101000001006756_160320221318.csv - Editor
Datei Bearbeiten Format Ansicht Hilfe
SUBSCRIPTIONTYPE;BILLERID;RECIPIENTID;RECIPIENTTYPE;LANGUAGE;GIVENNAME;FAMILYNAME;COMPANYNAME;ADDRESS;ZIP;CITY;COUNTRY;EMAIL;UID;CREDITACCOUNT;CREDITORREFERENCE;CONTRACTNR
1;41100000000000050;4110000000000001;PRIVATE;de;Hans;Muster;;Musterstrasse 1;3000;Bern;CH;hans.muster@mail.ch;;;X
1;41100000000000050;4110000000000002;COMPANY;fr;;;Example SA;Strasse 1;3000;Bern;CH;info@example.ch;CHE123456789;;;X
2;41100000000000050;4110000000000003;PRIVATE;it;Giovanni;Esempio;;Strasse 2;3001;Bern;CH;giovanni.esempio@mail.ch;;01-001234-1;123456789012345;
2;41100000000000050;4110000000000004;PRIVATE;en;John;Example;;Strasse 3;3002;Bern;CH;john.example@mail.ch;;CH513000001250090342;123456789012345678901234567;
2;41100000000000050;4110000000000005;PRIVATE;de;Karin;Beispiel;;Strasse 4;3003;Bern;CH;karin.beispiel@mail.ch;;CH0309000000250090342;RF20200226000ALPHA1234567;
3;41100000000000050;4110000000000006;PRIVATE;de;Kurt;Anders;;Strasse 5;3004;Bern;CH;kurt.anders@mail.ch;;;;
```

It includes:

- 2 examples of SubscriptionType 1 = registration via registration form
- 3 examples of SubscriptionType 2 = direct registration (each with an ISR reference, QR reference and SCOR reference)
- 1 example of SubscriptionType 3 = deregistration

Additional fields are only provided for SubscriptionType 1, and are marked in the sample file with an X.

```
NAME;FAMILYNAME;COMPANYNAME;ADDRESS;ZIP;CITY;COUNTRY;EMAIL;UID;CREDITACCOUNT;CREDITORREFERENCE;CONTRACTNR
erstrasse 1;3000;Bern;CH;hans.muster@mail.ch;;;X
sse 1;3000;Bern;CH;info@example.ch;CHE123456789;;;X
;Strasse 2;3001;Bern;CH;giovanni.esempio@mail.ch;;01-001234-1;123456789012345;
asse 3;3002;Bern;CH;john.example@mail.ch;;CH513000001250090342;123456789012345678901234567;
trasse 4;3003;Bern;CH;karin.beispiel@mail.ch;;CH0309000000250090342;RF20200226000ALPHA1234567;
sse 5;3004;Bern;CH;kurt.anders@mail.ch;;;;
```

In the Editor mode, you can fill these values with real or even deliberately false information that you want to use for testing, for instance as follows:

```
NAME;FAMILYNAME;COMPANYNAME;ADDRESS;ZIP;CITY;COUNTRY;EMAIL;UID;CREDITACCOUNT;CREDITORREFERENCE;CONTRACTNR  
terstrasse 1;3000;Bern;CH;hans.muster@mail.ch;;;1582369  
asse 1;3000;Bern;CH;info@example.ch;CHE123456789;;;9999999  
;Strasse 2;3001;Bern;CH;giovanni.esempio@mail.ch;01-001234-1;123456789012345;  
asse 3;3002;Bern;CH;john.example@mail.ch;CH5130000001250090342;123456789012345678901234567;  
strasse 4;3003;Bern;CH;karin.beispiel@mail.ch;CH0309000000250090342;RF20200226000ALPHA1234567;  
asse 5;3004;Bern;CH;kurt.anders@mail.ch;;;;
```

You can also copy as many lines as you want, and generate more samples in the process. Likewise, BillerID and RecipientID, or other information such as names, can be replaced by real values as you see fit. By doing so, you create a sample form that is identical to when one of your customers registers/deregisters directly via eBill.

You can do exactly the same with the XML sample file. To do this, you must open the XML file with an XML editor in which you can enter the necessary information manually.

```
1 <?xml version="1.0" encoding="utf-8"?>  
2 <CustomerRegistrationMessage xmlns:xsd="http://www.w3.org/  
version="2.0">  
3 <CustomerRegistration>  
4 <SubscriptionType>1</SubscriptionType>  
5 <BillerID>41100000000000050</BillerID>  
6 <RecipientID>41100000000000001</RecipientID>  
7 <RecipientType>PRIVATE</RecipientType>  
8 <Language>de</Language>  
9 <CustomerNameAddress>  
10 <NamePrivate>  
11 <GivenName>Hans</GivenName>  
12 <FamilyName>Muster</FamilyName>  
13 </NamePrivate>  
14 <Address>Musterstrasse 1</Address>  
15 <Zip>3000</Zip>  
16 <City>Bern</City>  
17 <Country>CH</Country>  
18 </CustomerNameAddress>  
19 <Email>hans.muster@mail.ch</Email>  
20 <CustomerSubscriptionFormField>  
21 <TechnicalID>CONTRACTNR</TechnicalID>  
22 <Value>1582369</Value>  
23 </CustomerSubscriptionFormField>  
24 </CustomerRegistration>
```

A sample file generated in this way can only be read in your test environment and used for testing purposes. If need be, the file can be placed directly in the input channel and processed further from there.

If you wish to have the test file moved from the PostFinance environment to the channel you require, please contact our e-bill helpdesk.

PLEASE NOTE: If the settings for the login screen have been configured in the **customer test environment**, you must **configure these in exactly the same way in the** productive environment.

4.2.2 Tests using the banking porta

Dedicated e-bill helpdesk staff have access to the SIX eBill banking portal, where the eBill portal can be displayed in real life. Registration/deregistration tests can also be carried out here, generating corresponding registration/deregistration test files that can be downloaded the following day from the invoicing portal under "Downloads". These tests are an even closer reflection of reality because the eBill portal can be simulated via the banking portal. However, they are more complex for all parties involved.

Please contact your advisor if you would like to conduct tests using the banking portal.

For regulatory reasons, customers cannot gain access to the banking portal themselves.

4.3 Send invoices

If you are configured in the customer test environment according to section 2.1, you can upload invoices and deliver for eBill.

A precondition for successful submission to eBill is that the authorizations for delivery for the relevant invoice recipients are stored for you at SIX eBill. This is also the case if the look-up function is activated for these invoice recipients.

The following pre-configured invoice recipients are available to you for testing in the test environment.

Case	First name	Last name	Company name	Date of birth	E-mail / company ID no.	Segment	eBillAccountID / PID	Look-up
1	Sandra	Berger-Test		01.01.1973	sandraberbertest.20210730-141256479@ebill.ch	PC	41012178193445685	Active
2	Thomas	Müller-Test		10.10.1997	thomasmlertest.20210730-141041679@ebill.ch	PC	41012139347097339	Active
3	Melanie	Kaiser-Test		10.05.1973	melaniekaisertest.20210730-141538852@ebill.ch	PC	41012117039793939	non active
4			Sample Company Ltd		CHE123456789	BC	41012142117897198	Active

This results in the following testing options:

Case	Name	Segment	Recipient addressing	Result
1	Berger-Test	PC	PID or e-mail possible PID recommended	Invoice successfully sent
2	Müller-Test	PC	PID or e-mail possible PID recommended	Invoice successfully sent
3	Kaiser-Test	PC	PID or e-mail possible PID recommended	Invoice not sent successfully because the recipient's authorization for delivery (look-up) is not active
4	Sample Company Ltd	BC	PID or company ID no. possible PID recommended	Invoice successfully sent

In this respect invoice recipients 1, 2 and 4 can also be used for end-to-end tests by adding the recipients to the registration sample file (see section 4.2.2) and using them to send test invoices once they have been stored in their database/receivables application.

4.4 Monitoring processing and the processing log

In the elnvoicing portal, you can check the result of processing in the "Search invoices" menu shortly after submission.

Send invoices
Search for invoices
Downloads
Settings
Find recipient

Invoice recipient

Invoice number

Transaction number

Status

Submission date from

Submission date to

More filters

Invoice recipient	Invoice number	Transaction number	Deliver...	Due date	Am...	Status
Berger-Test Sandra	20220204050311	20220204050311	04.02.2022	04.03.2022	720.00	Open
Berger-Test Sandra	20220204050313	20220204050313	04.02.2022	06.03.2022	0.00	Invalid
Berger-Test Sandra	20220204050310	20220204050310	04.02.2022	10.03.2022	6700.00	Open
Berger-Test Sandra	20220204050312	20220204050312	04.02.2022	05.03.2022	-2992.90	Invalid
	202202041	202202041	04.02.2022	06.03.2022	1.00	Invalid

Any system notifications are visible in the transaction details.

Transaction details: 202202041

Invoice recipient:	Invoice issuer ID:	
Invoice number: 202202041	Transaction number: 202202041	Tracking no.:
Submission date: 04.02.2022 15:55:07	Due date: 06.03.2022	
Amount: 1.00	Creditor/QR reference:	ISR reference number:

System notifications:
AccountID () is not a valid Account Number

Delivered file
 PDF
 Sent file

The following day a processing log will be provided. You can either download it from the elnvoicing portal under “Downloads” or via the set delivery channel.

Send invoices
Search for invoices
Downloads
Settings
Find recipient

Processing log

Registration/deregistration

Date	File name	Status	I
04.05.2022	Process_Protocol_040520220220_41101000001006756.xml	Open	

4.5 Other test cases

Other test cases are possible. For other cases, contact the eBill helpdesk. Below are a few examples:

Test case	Testing
Reject invoice (variant 1)	The e-bill helpdesk can set an invoice to the status “rejected by recipient”, which results in a corresponding notification in the next processing log.
Reject invoice (variant 2)	The e-bill helpdesk can reject an invoice via the banking portal (see section 4.2.3), which results in a corresponding notification in the next processing log.
NOK cases	Deliberately erroneous invoices can be submitted autonomously, e.g. containing impossible date values. These are displayed automatically in the elnvoicing portal with the corresponding error message, or in the next processing log with NOK.

Note: Direct registrations (SUBSCRIPTIONTYPE 2) cannot be tested end-to-end in the customer test environment because they are triggered by a payment entered previously in an e-banking application.