TECHNICAL SPECIFICATIONS

One-Click-Pay

epay

History of Changes

Date	Version	Changes
22/04/2014	1.0	Initial version
21/10/2014	2.0	Addition of the option to send a value to the CVV2 when performing transactions with tokens, via the Web Services.
03/06/2015	3.0	Addition of the new token production method without any transaction via the Redirection solution (iFrame).
10/04/2018	3.1	Addition of optional card expiration usage for token production without any transaction via the Redirection solution (iFrame).
16/12/2021	4.0	Addition of the new token production method with card verification and without charge (Account Verification).
16/03/2022	4.1	Service rebranding to epay eCommerce
13/10/2022	4.2	Update of manual links
20/09/2023	4.3	Parameter changes in chapter 9

Contents

The "One-Click-Pay" service is aimed for merchants that wish to perform electronic card charges by sending **epay eCommerce** one unique "token" rather than the ordinary card number (e.g. companies using standing orders). In this way the merchant's application may charge cards via Euronet Merchant Services electronic payment system (epay eCommerce) without saving the actual card details and without the cardholder needing to insert each time the card details in any applications.

Each token is unique, it has the 888888********** format and meets the requirements of a valid card number, so that the merchant can save these values in its systems without creating any problems of non-validity.

In the following sections, there is detailed information on the following:

- **Section 2→General Architecture:**
  Description of the general architecture of the "One-Click-Pay" service.

- **Section 3 → Details for the Creation of a Test Account:**
  Presentation of the details needed to be sent to Euronet Merchant Services in order to create a *test account*, so as to make the test transactions.

- **Section 4 →:Token Production via the Tokenization Web Service**
  Description of the Web Service through which a merchant can request the production of a token, without any transaction being performed.

- **Section 5 →: Token Production via the Redirection solution**
  Description of the option to produce and return a token when a successful transaction is performed via the Redirection solution.

- **Section 6 →: Token Production via Redirection (iFrame)**
  Description of the option to produce and return a token through the Redirection (iFrame) solution, without any transaction being performed.

- **Section 7 → Token Production through a Web Service Transaction**
  Description of the option to produce and return a token when a successful transaction is performed via the Transaction Web Service or the Rest Web Service.

- **Section 8 → Token Production through a Batch File**
  Description of the option to produce a token through a batch file.

- **Section 9 → Token production with card verification and use of strong authentication**
  Description of the token production capability using a special transaction that checks the validity of the card without charging it.

- **Section 10 → Transaction Execution using a Token**
  Description of the ways in which a merchant can send transactions using a token instead of the card details.

- **Section 11 → Implementation Check List:**
  List of actions to be performed by the technical manager in charge, so as to complete the cooperation with the merchant.

In order for a merchant to use the "One-Click-Pay" service, the merchant needs to decide how it will acquire the tokens and by which service it will charge its cards using the tokens. The various options are displayed below:
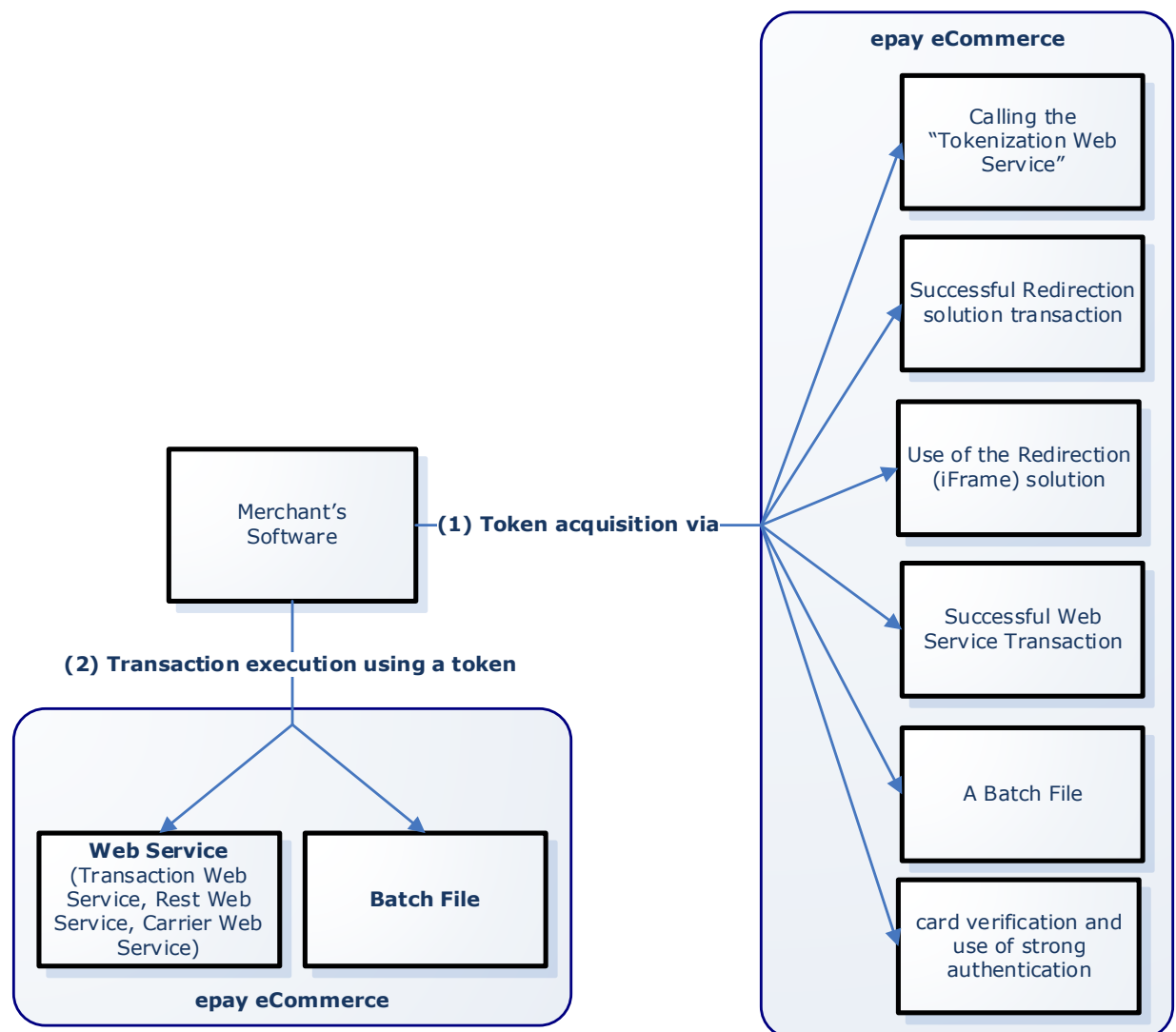

Diagram 1: *General architecture of the "One-Click-Pay" service*

1.	Token acquisition

The merchant may acquire a token in the following ways:

- **By calling the "Tokenization Web Service":**
  This is a special Web Service through which the merchant sends the card details and receives in its response the token produced for the specific details.

- **Successful Redirection solution transaction:**
  It is possible to produce and return a token when a successful transaction is performed via the Redirection solution.

- **Use of the Redirection (iFrame) solution :**
  It is possible to produce and return a token through a specific solution functionality, without any transaction being performed.

- **Successful Web Service Transaction:**
  It is possible to produce and return a token when a successful transaction is performed via the Transaction Web Service or the Rest Web Service.

- **Use of a batch file to produce tokens:**
  Tokens can be produced by sending a batch file containing card details. After the request file is processed by epay eCommerce, a response file is created which contains the tokens produced.

- **Token production with card verification and use of strong authentication:**
  It is possible to generate and return tokens using strong identification of the cardholder and a special transaction that checks the validity of the card without charging the card.

2.	Transaction execution using a token

If tokens are produced in one of the aforementioned ways, the merchant can send transactions using a token instead of the card details. The services available for token transactions are the following:

- **Through a Web Service:**
  The merchant can use any of the available Web Services (Transaction Web Service, Rest Web Service, CarrierWeb Service) and use a token during the call, instead of the ordinary card details.

- **Through a Batch File:**
  The merchant may send card charges through a batch file ("Batch File" solution), which will include tokens instead of the ordinary card details.

> **Note:**
> - **Token format:**
>   It consists of 16 digits, meets the requirements of a valid card number and has the 888888********** format, namely it always begins with 888888.
>
> - **Uniqueness of the token:**
>   Each token is unique. However, if a merchant requests a token for

card details that a token has already been requested in the past, then the same token will be returned.

- **Expiration of a card to which a token corresponds to:**
  If a token corresponds to a card with a specific expiration date, when the card has expired, it will not be possible to use the token and error 981 "Invalid Card number/Exp Month/Exp Year" will be displayed. In this case, a new token must be requested, providing the new expiration date.

The information to be sent to Euronet Merchant Services in order to provide the necessary technical information (*test account*) for the test transactions, are the following (all mandatory):

- **Details of the technical manager in charge:**
  - Full name of the technical manager in charge.
  - Contact telephone number of the technical manager in charge.
  - E-mail address of the technical manager in charge.
  - Company where the technical manager in charge is employed.

- **Details of the merchant which the system belongs to:**
  - Distinctive title of the merchant which the system belongs to.
  - VAT ID no. of the merchant which the system belongs to.
  - Domain name of the merchant's live site, if transactions are to be sent through the site.

- **Technical details:**
  - **Token production method**:

    It must be stated which of the following methods will be used for the production of the tokens:

    - ❑ **By calling the Tokenization Web Service:**
      The IP address of the server, from which the call is made, must also be sent.

    - ❑ **Through a Redirection solution transaction:**
      The details of section 3, indicating the specifications of the Redirection solution, must also be sent.

    - ❑ **By using the Redirection (iFrame) solution:**
      The details of section 3, indicating the specifications of the Redirection (iFrame) solution, must also be sent.

    - ❑ **Through a transaction using the Web Service solution (Transaction Web Service or Rest Web Service):**
      The IP address of the server, from which the call is made, as well as the programming language, must also be sent.

    - ❑ **Through a token production batch file**

    - ❑ **Using the special card verification service and the use of strong authentication**
      The information in section 3 of the Redirection solution specifications or the IP address of the server from which the call will be made should also be sent if the company uses a Web Service.

  - **Token method of use**:

    It must be stated in which of the following ways the transactions will be performed using tokens:

    - ❑ **Through the Web Service (Transaction Web Service, Rest Web Service or Carrier Web Service):**

The IP address of the server, from which the call is made, must also be sent, as well as the programming language used and it must be stated whether a CVV2 value shall be sent or not.

❑ **Through a Batch File**

Euronet Merchant Services will send to the technical manager the details needed according to the service which shall be used:

- If the Tokenization Web Service is to be used, then the value of the "CRS" parameter must also be sent.

- If the Redirection service or some Web Service (Transaction Web Service, Rest Web Service or Carrier Web Service) or a Batch File is used, then the details of the test account must also be sent, as described in the respective specifications of the service.

Information regarding the different ways tokens are produced and used is included in the following sections.

The "Tokenization Web Service" is a SOAP Web Service through which a merchant may acquire tokens that will correspond to cards without executing a transaction. To URL is the following:

https://paycenter.piraeusbank.gr/services/TokenService.asmx

The information needed to call the "Tokenization Web service" is the following:

REQUEST PARAMETERS		
Parameter name	**Description**	**Type**
CRS	A unique number which corresponds to the merchant and is provided by Euronet Merchant Services.	String
Username	The name of the user. Provided by Euronet Merchant Services.	String
Password	The user password that has been encrypted using the MD5 hashing algorithm. Provided by Euronet Merchant Services (in unencrypted format).	String
MerchantReference	Reference code of the request. Generated by the merchant's system and describing the specific token production request. ▪ Has a maximum length of **50 characters**. ▪ Does not support Greek characters. ▪ The use of spaces is not allowed. ⚠ **Attention!** It is allowed to use the same MerchantReference in more than one requests, however, it is recommended to use a different value for each different card, so as to facilitate technical support in case of any problem.	String
CardNumber	The card number to which the token will correspond. The maximum number of digits of the card is 19.	String
ExpirationMonth	The expiration month of the card.	Integer
ExpirationYear	The expiration year of the card.	Integer

> **Note:**
> The expiration date is optional. Consequently, there are the following alternatives:
> - a value shall either be sent for both parameters (ExpirationMonth and ExpirationYear), so that the transactions made in the future with the produced token will include the expiration date as well; or
> - no value shall be sent to either one of the parameters (ExpirationMonth and ExpirationYear), so that the transactions made with the produced token, will be sent without any expiration date.

The parameters sent in the response are the following:

RESPONSE PARAMETERS		
Parameter name	**Description**	**Type**
MerchantReference	The reference code sent to the request.	String
SupportReferenceID	Reference id of the request made. It has a different value for each request. > **Note:** > It is necessary to save its value, so that if needed it may be used as reference when communicating with Euronet Merchant Services.	Long integer
StatusFlag	The parameter value indicates whether a token was successfully produced. Possible values: ▪ **Success**: The token was successfully produced and is included as a value in the "Token" parameter. ▪ **Error**: There was a problem, and no token was produced. Details on the problem which emerged are included in the "ResultCode" and "ResultDescription" parameters.	String
ResultCode	The result code after the request has been processed, that indicates whether there was a technical problem when generating the token. Specifically: ▪ **Value is 0**: There was no problem and the token was successfully produced. ▪ **Any value other than 0**: There was a problem with the request details or some kind of technical problem in epay eCommerce, so no token was produced. The "ResultDescription" parameter	String

	contains a description of the problem which emerged.	
ResultDescription	The description corresponding to the value of the "ResultCode" parameter. It is needed to examine the value of the parameter when the value of the "ResultCode" parameter is not null.	String
Token	The value of the token produced. Displays a value only when StatusFlag=Success.	String

The diagram below shows the steps to be performed so as to check whether the Tokenization Web Service successfully produced a token.
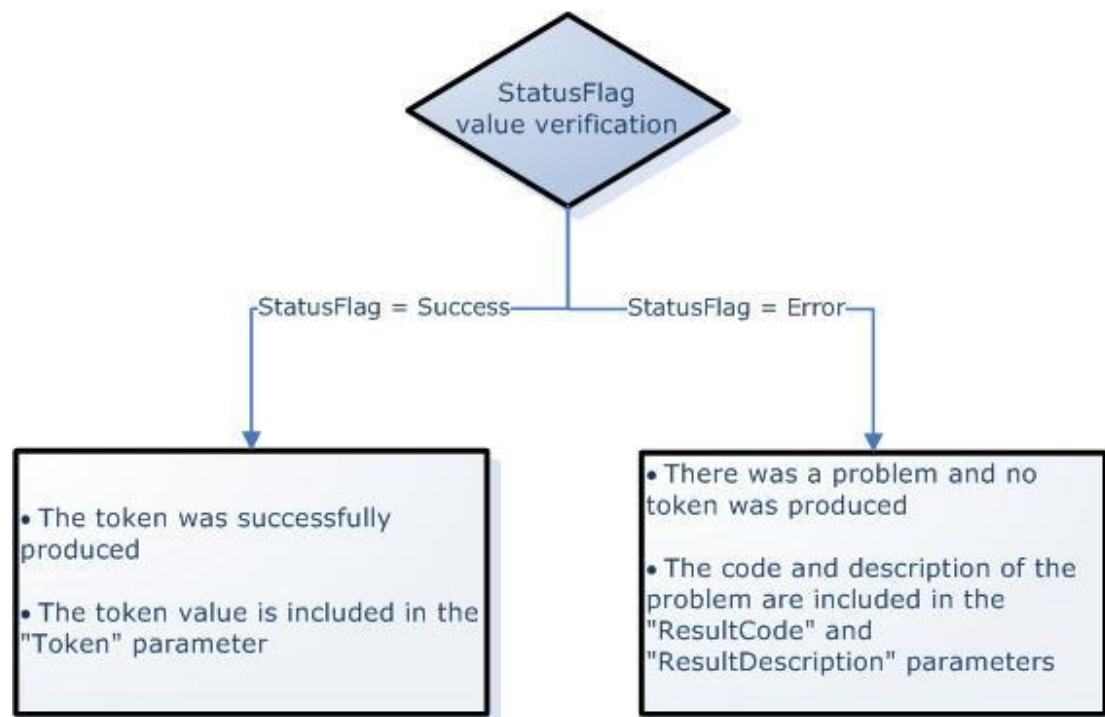

Diagram 2: *Check of the response from the Tokenization Web Service*

> **Note:**
> If the call to the Tokenization Web Service was successful and for some reason the application of the merchant needs the Web Service response again (e.g. if the token was not registered for technical reasons), it can call the Web Service again with the same parameters (same card details, same MerchantReference), and the response will be sent back with the same token.

5. Token production via the Redirection solution

It is possible to produce a token through a successful transaction which shall be performed via the "Redirection" service. Specifically, apart from the parameters which are already returned via the Redirection service, what is also sent to the site of the merchant is the token corresponding to the details of the card which was used in the transaction, as well as some other card details. Information on the Redirection service should be sought to the relevant specifications provided by Euronet Merchant Services.

> **When is a token returned in a Redirection solution transaction?**

In order for a token to be returned through a transaction which shall be performed via the "Redirection" service, the following must apply:

- The appropriate technical arrangements must have been made by Euronet Merchant Services to the merchant's merchant id.

- The transaction must have been a successful one, i.e. StatusFlag=Success (so that the response was sent to the success URL).

> **Which are the additional parameters sent when a token is produced via the Redirection service?**

When a successful transaction is made through the Redirection service and simultaneously a token is produced, then the additional parameters that are sent to the success URL are the following:

- **Token**
  The token which corresponds to the card number and the expiration date used in the transaction.

- **CardNumber**
  The card number corresponding to the token in masked format, e.g. 411111******1111 (namely, it includes only the first 6 and the last 4 digits, and the rest are replaced by asterisks).

- **CardExpDate**
  The expiration date of the card used in the transaction in "MM-YYYY" format, e.g. 10-2018.

It is possible to produce a token through a special functionality of the "Redirection (iFrame)" service. Specifically, a merchant may acquire tokens that will correspond to cards, without any transactions being made. The merchant follows the same procedure as for the execution of a transaction through the "Redirection (iFrame)" solution, with the following variation in the URL where the POST is performed:

https://paycenter.piraeusbank.gr/redirection/pay.aspx?TokenOnly=YES
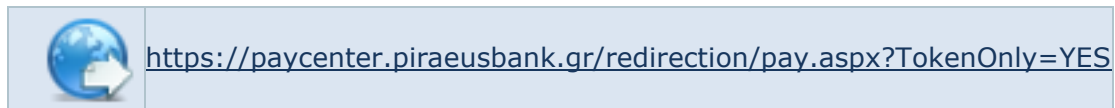
In this case, the value "**0,01**" should be sent to the <**Amount**> parameter.

The merchant is led to the form below, where he/she is asked to insert the card and optionally the expiration date, in order to store it safely in a token. Information on the Redirection (iFrame) service should be sought in the relevant specifications provided by Euronet Merchant Services.

CARD NUMBER *	
EXPIRATION DATE *	Month ▼ Year ▼

Secure Storage

In order to return a token through this specific functionality of the service and for the optional non-use of the expiration date of the card, the appropriate technical arrangements should be made by Euronet Merchant Services the merchant id of the Business Partner.

Which are the additional parameters sent when a token is produced via the Redirection (iFrame) service?

When a token is produced through the TokenOnly function of the Redirection(iFrame) service, then the additional parameters that are sent to the success URL are the following:

- **Token**
  The token which corresponds to the card number and the expiration date entered by the user.

- **CardNumber**
  The card number corresponding to the token in masked format, e.g. 411111******1111 (namely, it includes only the first 6 and the last 4 digits, and the rest are replaced by asterisks).

- **CardExpDate**
  The expiration date of the card entered by the user in "MM-YYYY" format, e.g. 10-2018.

7. Token production through a Web Service Transaction

It is possible to produce a token via a successful transaction through one of the following Web Services:

- **Transaction Web Service** (standard version of the Web Service)

- **Rest Web Service** (Web Service with Rest technology)

General information on the call and use of these Web Services is included in the corresponding specifications provided by Euronet Merchant Services.

In case of a successful transaction through these Web Services, the response contains the value of the token corresponding to the transaction card details.

When is a token returned in a Web Service transaction?

In order for a token to be returned through a Web Service transaction, the following must apply:

- The appropriate technical arrangements must have been made by Euronet Merchant Services to the merchant's merchant id.

- The transaction must be successful, namely StatusFlag=Success if the call was made from the Transaction Web Service or StatusFlag=0 if the call was made from the Rest Web Service.

Which are the additional parameters sent when a token is produced via a Web Service?

When a successful transaction is performed via a Web Service and a token is produced, then the response also includes the following parameter:

- **Token**
  The token which corresponds to the card details used for the transaction.

It is possible to produce several tokens for a set of cards by sending a batch file. The file contains data on the cards for which the merchant wishes to produce tokens, and after processing this file, a response file is created containing the tokens produced.

The request file must be encrypted with PGP protocol, using the public key provided by Euronet Merchant Services. Then the file is uploaded through the epay eCommerce AdminTool, where the response file is also made available.

The diagram below indicates the steps to be followed by the merchant in order to use the batch file for the production of tokens:
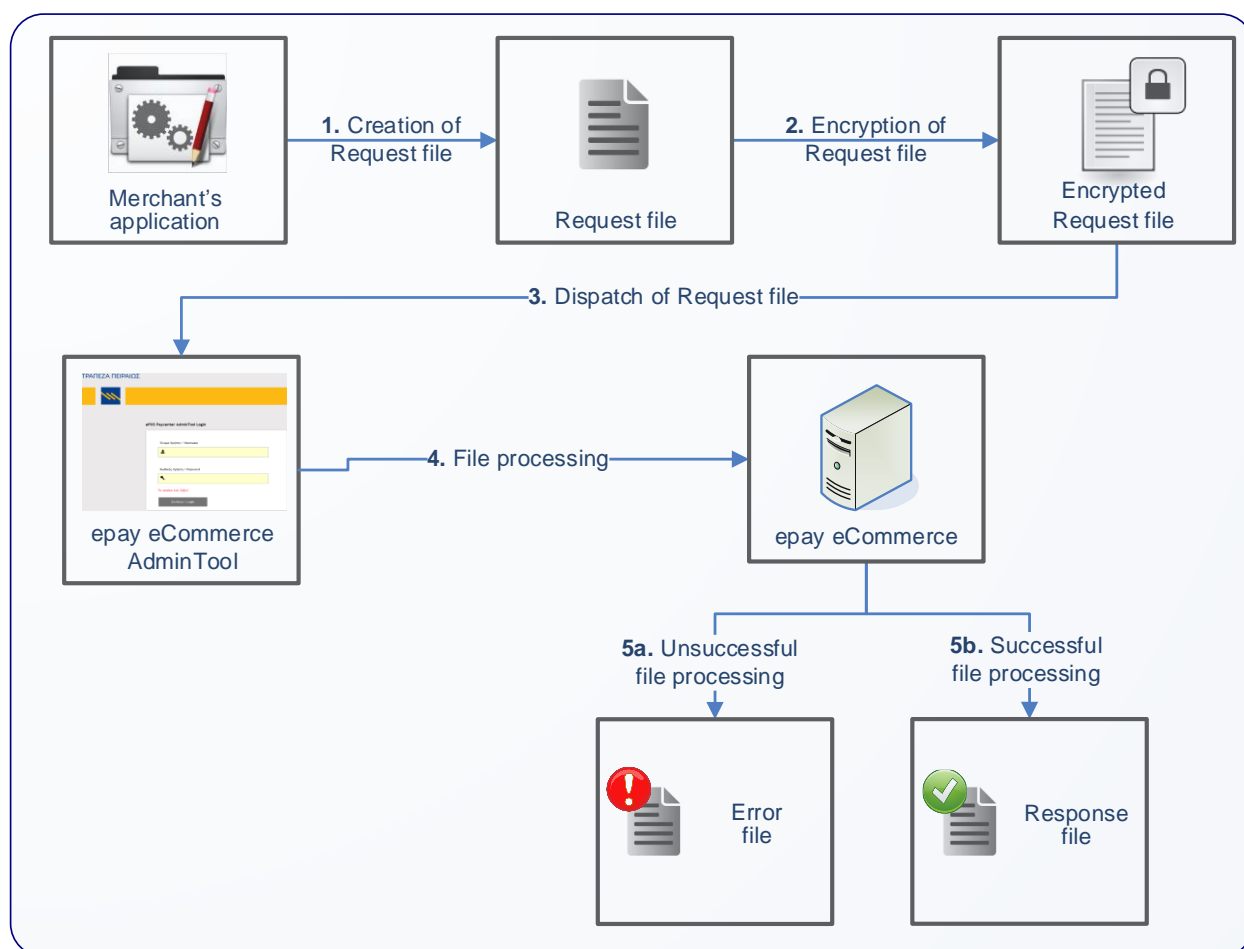

Diagram 3: *Token production procedure through a batch file*

In detail, the steps of the procedure are the following:

1.	Creation of a Request File

The merchant must create a tab-delimited file that has a unique name in the following format:

> Name of the unencrypted request file:
>
> **<filename>.txt**

A sample file entitled "TestTokenFile.txt" is attached.

The layout of the file is presented below, where the information should be separated by a "tab" character:

Parameter	Description
HEADER ROW	
CRS	The code of the merchant, which is provided by Euronet Merchant Services.
DETAIL ROW **(Each row corresponds to a request for the production of a token)**	
Merchant Reference	Reference code of the request. Generated by the merchant's system and describing the specific token production request. ▪ Has a maximum length of **50 characters**. ▪ Does not support Greek characters. ▪ The use of spaces is not allowed. ⚠ **Attention!** It is allowed to use the same MerchantReference in more than one requests, however, it is recommended to use a different value for each card, so as to facilitate technical support in case of any problem.
Field separator	A «tab» character
Card number	The card number for which the token shall be produced.
Field separator	A «tab» character
Expiration month	The expiration month of the card in numbers (1, 2, 3, etc.). If the merchant wishes the transactions made with the produced token, not to contain any

	expiration date, then the value 0 must be sent.
Field separator	A «tab» character
Expiration year	The expiration year of the card (4 digits). If the merchant wishes the transactions made with the produced token, not to contain any expiration date, then the value 0 must be sent.

> **Note:**
>
> The expiration date is optional. Consequently, there are the following alternatives:
>
> - a value shall either be sent to both parameters (expiration date and expiration year) so that the transactions made in the future with the produced token, will include the expiration date as well; or
>
> - the value 0 shall be sent to both parameters (expiration date and expiration year), so that the transactions made with the produced token, will be sent without any expiration date.

2. Encryption of a Request File

The merchant has to encrypt the request file with PGP protocol, using the Euronet Merchant Services public key. This is provided at the beginning of the cooperation by Euronet Merchant Services. The file name must be **unique** and shall have the following format:

Name of the encrypted request file:

<filename>.txt.pgp

> **Attention!**
> The file must not be digitally signed.

3. Dispatch of Request file to epay eCommerce

The merchant sends the encrypted file to epay eCommerce by using the "AdminTool". The AdminTool users who have Administrator rights may upload files via the screen that appears on the menu "Batch Files Admin→ Token Productions Files".

4. File processing by epay eCommerce

epay eCommerce processes the entries of the request file and produces tokens that correspond to the cards on the file.

5. Creation of a response file

epay eCommerce then creates an <u>unencrypted</u> response file which is available through the "AdminTool" in the column "Processed files", and reads as follows:

■ **Failure to process a file due to a technical issue**

If there was a problem and it was not possible to process the file, then the column "Status" in the AdminTool shall display "Failure" and an (unencrypted) error file shall be produced, containing information about the problem that occurred.

If the request file was entitled "filename.txt.pgp", then the name of the error file will have the following format:

> Name of the response error file:
>
> ***Error_<filename>.txt***

A sample file entitled "Error_TestTokenFile.txt" is attached.

This file contains a single tab-delimited row with the following information:

- ▪ **Support Reference ID:**
  Unique reference id of the problem which emerged. It can be used when communicating with Euronet Merchant Services.

- ▪ **Error code:**
  The error code which corresponds to the problem that emerged.

- ▪ **Error description:**
  Description of the problem that emerged.

■ **Successful file processing**

If the processing of the file was completed normally, then the column "Status" in the AdminTool shall display "Completed" and the standard (unencrypted) response file will be produced.

If the request file was entitled "filename.txt.pgp", then the name of the standard response file will have the following format:

> Name of the standard response file:
>
> ***Response_<filename>.txt***

A sample file entitled "Response_TestTokenFile.txt" is attached.

The layout of the standard response file is presented below, where the information is separated by a "tab" character:

Parameter	Description
HEADER ROW	
CRS	The code of the merchant, as sent in the request file.
DETAIL ROW **(Each row corresponds to a request for the production of a token)**	
Merchant Reference	The reference code of the request as sent in the request file.
Field separator	A «tab» character
Card number	The card number which was sent to the request file **in masked format**, namely indicating only the first 6 and last 4 digits, while the other digits have been replaced by asterisks. Namely if the card number in the request file is **4111111111111111**, then the standard response file will include the value **411111*****1111**.
Field separator	A «tab» character
Expiration month	The expiration month of the card as sent in the request file.
Field separator	A «tab» character
Expiration year	The expiration year of the card as sent in the request file.
[*From here on the columns include information on the processing result of the entry*]	
Field separator	A «tab» character
Token	The token produced, which corresponds to the card details of that particular entry. It has a value only if the column "Status" displays an "S" as value (see next parameter).
Field separator	A «tab» character
Status	The processing result of this request/entry, which defines whether a token was successfully produced or not. The possible values are: ▪ **S** (Success)**:** The token was successfully produced and is included in the previous parameter.

	▪ **E** (Error): There was a problem and no token was produced for this entry. The parameters entitled "ResultCode" and "ResultDescription" contain information on the problem that occurred.
Field separator	A «tab» character
Result code	The result code after the entry has been processed, that indicates whether there was a technical problem when generating the token. Specifically: ▪ **Value is 0**: There was no problem and the token was successfully produced. ▪ **Any value other than 0**: There was a problem, so no token was produced, namely this is an error code. The "ResultDescription" parameter contains a description of the problem which emerged.
Field separator	A «tab» character
Support Reference ID	Reference id of the request made. It has a different value for every request (i.e. for each row of the file). **Note:** It is necessary to save its value, so that if needed it may be used as reference when communicating with Euronet Merchant Services.
Field separator	A «tab» character
Result Description	The description corresponding to the value of the "ResultCode" parameter. The file displays a value when the "ResultCode" is not null (i.e. when there is a problem and no token was produced).

Note:
In order to examine whether a token was successfully produced for any entry of the file, it suffices to check the value of the "Status" parameter. If there was a problem (Status=E), then further information may be obtained about the problem from the parameters entitled "ResultCode" and "ResultDescription".

A business can acquire tokens corresponding to cards, using a special transaction that checks the validity of the card without charging it.
This is where the cardholder enters the business's site, instructs the business to store the card, without the need for a charge at the time.

In detail, the steps to be followed are as follows:

➢ To request storage of the card via Redirection or Web Service upon successful completion of the 3D Secure process:

■ **For transactions via Redirection:**

In the Ticketing Web Service, values should be sent to the parameters:
  ▪ **RequestType = 00** (Preauthorization transaction)
  ▪ **Amount = 0,00** (Zero amount)
  ▪ **AccountVerification = 1**

If the 3D Secure process has been successfully completed (in which case AuthStatus = 01 will be returned), a no-charge card verification transaction will follow and the business will receive a successful response in the Success URL with the value in the Token parameter filled in (which should be saved).

Otherwise (if the 3D Secure process is not successful), the customer will be redirected to the card details entry page to perform the process again (no action required by the business).

■ **For transactions via Web Service:**

In the 3D Secure (Wrapper) process, values should be sent to the parameters:
  ▪ **Amount = 0**
  ▪ **ChallengeInd = 04**
  ▪ **Currency = 978**
  ▪ **Exponent = 2**

The 3D Secure process must have completed successfully, meaning the **MdStatus** parameter must have been returned with **a value of 1 or 4**.

The Transaction Web Service is then called, using the following values. No card charge will be made through this call.
  ▪ **RequestType = AUTHORIZE** (Preauthorization transaction)
  ▪ **Amount = 0,00** (Zero amount)
  ▪ Submit **ECI, CAVV, XID, Protocol, DsTransID** as returned from the 3D process.

If the transaction is successful, epay eCommerce will return a value in the "Token" parameter, which should be stored by the merchant.

If a merchant acquires tokens in one of the ways described in the previous sections, transactions may be sent to epay eCommerce (sales or preauthorizations) using these tokens, via the following solutions:

■ **Web Service**

Any of the Web Services (Transaction Web Service, Rest Web Service, Carrier Web Service) may be used to send a sale or preauthorization transaction, using a token instead of the ordinary card number.

Specifically, the request message of the transaction is as described in the respective specifications of the Web Service, with the following differences:

▪ **CardNumber:**
The merchant must send the token instead of the card number.

▪ **CardType:**
The merchant must send the value "UNKNOWN".

▪ **ExpirationMonth, ExpirationYear:**
No value shall be sent for these parameters or the value null is sent.

▪ **CVV2:**
With this parameter, you can either send a value or not send one / send a null value (the merchant should have informed Euronet Merchant Services in this regard).

The response messages will have the exact format described in the respective specifications of the Web Service (without returning the "Token" parameter again).

■ **Batch File**

Sale or preauthorization transactions may be sent through the "Batch File" service, containing tokens instead of card numbers.

Specifically, sales or preauthorizations which are sent through the "Batch File" service have the following differences when using tokens:

▪ **Card Number:**
Instead of the card number contained in columns 68-83, the merchant must use the token.

▪ **Expiration Date:**
The columns containing the expiration month (85-86) and the expiration year (88-91) should consist of spaces.

▪ **Card Type:**
The column of the card type (97-97) should contain the value 0.

The response files shall have the applicable layout, as described in the respective specifications.

A sale or preauthorization, which includes a token instead of the ordinary card details, will be sent for approval to the issuing bank, along with the card number and any expiration date/CVV2 for which the token was produced.

11. Implementation Check List

S/N	TASK
1.	➡ **CONTRACT SIGNING**
	Cooperation agreement signed between the merchant and Euronet Merchant Services.
2.	➡ **TECHNICAL IMPLEMENTATION**
	Implementation of the appropriate epay eCommerce services, according to the contract signed (e.g. implementation of the Redirection solution or a Web Service or the Batch File service, etc.), according to the specifications given by Euronet Merchant Services.
3.	➡ **DISPATCH OF INFORMATION FOR THE TEST ACCOUNT AND PERFORMANCE OF TESTS**
	■ Dispatch to Euronet Merchant Services of the information requested in section 3. ■ Dispatch by Euronet Merchant Services to the technical manager in charge, of the technical information needed to perform the tests (depending on the service to be used). ■ Performance of the tests by the technical manager in charge. ■ Update of Euronet Merchant Services for the completion of the tests.
4.	➡ **DISPATCH OF LIVE DATA**
	Provided that the necessary tests were completed correctly, the live data shall be sent to the merchant (according to the service/s used).