

TPV-Virtual

Guía de Integración BIZUM comercios SIS

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Version	Date	Affects	Brief description of the change
1.0	10/01/2019	ALL	Initial version
1.1	10/10/2019	Point 4	Point 4 is added.
1.2	14/11/2019	Point 3.1	Data for the testing environment is added.
1.2.1	20/05/2020	Double Flow	Reference generation removed.
1.3	08/01/2021	Point 3	Specific parameterisation is included to report the client's mobile phone number.
1.4	23/04/2021	Point 3	Reference to the type of host-to-host connection in dual-flow and return operations is included.
1.5	28/09/2021	Points 5 and 6	REST integration specifications are included.
1.6	14/06/2022	Point 7	Point 7 included with new REST functionalities.
1.7	01/09/2022	Point 8	Point 8 is included with an introduction to PSD2 exemptions, including MIT.
1.8	18/01/2023	Point 8	MIT input parameters are updated and information on TRA and LWV exemptions is added.
1.9	31/01/2023	Points 5.1 and 8.1	Future specifications for RTP queries are added. Example of complete MIT operational flow added.
1.10	03/05/2023	Points 5.1 and 6	Definitive version of the updated RTP query defined to verify exemptions and validity of TIDs.
1.11	29/08/2024	Point 7.1	Update description and examples.
2.0	05/11/2025	ALL	References to Rest manual added. Update of merchant signature version.

2.1	05/11/2025	Points 5.2, 5.3, 6 and 10	Authentication backup in REST integration.
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1. Introduction

This guide aims to describe the modifications that a merchant must make to offer the BIZUM payment solution.

The BIZUM button must be offered to cardholders on the merchant's website. This means that the merchant must update their website to allow cardholders who are shopping at the merchant to see this option alongside the other payment options offered.

2. Operation

2.1 Description

The merchant must make changes so that BIZUM is displayed as another payment option on its website during the final purchase process (checkout).

If the merchant uses one of the e-commerce solutions on the market (Prestashop, Zen Cart, WooCommerce, OsCommerce, etc.), this must include a module that allows this connection.

An illustrative example of integration with Bizum is shown in the following image:

Mi Cesta		CANTIDAD	PRECIO UNIDAD	SUBTOTAL IVA	SUBTOTAL
	Dell Studio XPS, sobremesas con Intel Core i7	1	250,00 €	43,39 €	250,00 €
	Accesorios Sport Wii - Novedad para este mes	1	19,95 €	3,46 €	19,95 €

VACIAR RECALCULAR

Subtotal base: **223,10 €**
Subtotal IVA: **46,85 €**
Subtotal carro: **269,95 €**

bizum

2.2 Procedure

The steps required for a merchant to offer BIZUM are these three:

1. The merchant must have the option to pay with BIZUM activated by its bank.
2. The merchant must include a button on its website that identifies payment via BIZUM.
3. Make a call to the Virtual POS having a specific format and being very easy to implement.

3. Technical specifications – Integration Redirection

To offer BIZUM payments through the virtual POS terminal, a few minor modifications must be made to the merchant's server.

3.1 Inclusion of the BIZUM button on the merchant's website

In addition to the non-card payment methods already in use, a BIZUM payment button must be included via the virtual POS terminal alongside the other options.

Either of these two images can be used:



These buttons are included in a *zip file* that can be downloaded from the same documentation section where this document is located. The *zip file* is named: *Botones Bizum.7z (Bizum buttons.7z)*.

3.2 Payment operation

When the client clicks on the payment button, a similar request to a standard request made to the Virtual POS (*request via a redirection connection*) must be generated. This request must include the following field:

Ds_Merchant_PayMethods whose value will be the lowercase letter "z" for payment with BIZUM.

The Bizum operation has two different behaviours depending on the type of operation to be conducted:

- a. **Standard Bizum payment:** In this Bizum operation, the Virtual POS authenticates the client and requests authorisation in a single operation.

To use this method, the merchant must specify the following field in the request to the Virtual POS:

Ds_Merchant_OperationType = 0

NOTE: The format of the "Ds_Merchant_Order" parameter, the order number sent in the request, must have this format.

Campo	Descripción	Tipo	Formato
Ds_Merchant_Order	Nº De pedido	Alfanumérico	^[a-zA-Z0-9]{4,12}\$ Ej. 123456Ebf

- b. **Double-flow Bizum payment:** The double-flow reference indicates that the merchant has the option of performing the authentication and authorisation of the client's operation separately. The difference with *standard Bizum payment* lies in the type of operation (Ds_Merchant_OperationType) sent in the request to the Virtual POS (*request via a Redirection connection*).

NOTE: Option NOT available for e-commerce solutions such as (Prestashop, Zen Cart, WooCommerce, OsCommerce, etc.).

Once authentication has been completed, the merchant has a maximum of 30 days to launch the operation authorisation. Once this time has elapsed, the authorisation will no longer be valid. (request via a REST connection)

The following operation types must be used for these two phases:

Phase 1. Authentication (it must be performed with a connection to the Virtual POS via redirection)

To perform authentication, the following field must be included:

```
Ds_Merchant_OperationType = 7
```

Phase 2. Authorisation (must be performed with a connection to the Virtual POS via REST)

To perform authorisation, the following field must be included:

```
Ds_Merchant_OperationType = 8
```

Optionally, the merchant may provide the client's mobile phone number so that it automatically appears in the Bizum environment. To do so, the mobile phone number must be entered in the following field of the form:

```
Ds_Merchant_Bizum_MobileNumber
```

whose value will be the mobile phone number
including the prefix (e.g. +34700000000)

NOTE: The technical details for making a Redirection or REST request can be found in the following guides: "TPV-Virtual Integration Manual - Redirection.pdf" and "TPV-Virtual Integration Manual -REST.pdf".

3.3 Refund operation

A Bizum operation can be refunded by sending a REST request with the following field:

```
Ds_Merchant_OperationType = 3
```

The authorisation operation can also be returned through the Virtual POS Administration Portal. See point 4.2

4. Test environment – Redirection integration

There is a test environment that allows you to perform the necessary tests to verify the correct operation of the system before implementing it in the real environment.

The access URL for the test environment is:

<https://sis-t.redsys.es:25443/sis/realizarPago>

The URL for accessing the Administration Portal in the test environment is:

<https://sis-t.redsys.es:25443/canales>

Test data:

BIZUM user	Test case
700000000	Successful purchase
ko@ko.ko	Purchase rejected (Bizum key authentication error)

NOTE: Payments made in the test environment will not be valid for accounting purposes.

5. Technical specifications – REST integration

To conduct BIZUM operations via REST, the client (cardholder) must be able to accept Request To Pay, which consists of sending a notification to the client's mobile phone to accept the payment from there.

To find out if the client has this operation available, an RTP query service has been enabled, where the merchant can check the operations allowed by the client. Through this service, the merchant can find out if:

- The client has the BIZUM service and Request To Pay. In this case, BIZUM payment can be requested via REST as explained below, or via redirection, as explained previously.
- The client has the BIZUM service but not Request To Pay. In this case, BIZUM payment can only be requested via redirection.
- The client does not have the BIZUM service. In this case, BIZUM payment cannot be requested from the client.
- Verify the status of a client's TID (Depends on the input parameters) .
- Verify the exemptions supported by a client (depending on the input parameters).

5.1 RTP query request

5.1.1 Input parameters

The parameters required to use the query service are as follows:

Field	Description	Type	Format
DS_MERCHANT_ORDER	Order number	Alphanumeric	^[a-zA-Z0-9]{4,12}\$
DS_MERCHANT_MERCHANTCODE	Merchant number	Numeric	^\d{1,9}\$
DS_MERCHANT_TERMINAL	Terminal number	Numeric	^\d{1,3}\$
DS_MERCHANT_BIZUM_MOBILENUMBER	Client's phone number with prefix	String	^\+[0-9]{5,15}\$ E.g.: +34700000000
DS_MERCHANT_COF_TXNID	Operation ID to check its validity. OPTIONAL	String	^[a-zA-Z0-9]{1,15}\$
DS_MERCHANT_EXCEPT_SCA	Parameter indicating the query of exemptions	String	^Y\$

	permitted by the client		
	OPTIONAL		

As with any type of [REST integration](#), the merchant must send a POST request with the following parameters:

- **Ds_MerchantParameters:** Payment request data encoded in Base64.
- **Ds_SignatureVersion:** Signature algorithm version.
- **Ds_Signature:** Signature generated with the payment data.

The URL where the service is displayed is as follows, depending on the environment:

- **TEST environment:** <https://sis-t.redsys.es:25443/sis/rest/RTP/checkRtpUsuario>
- **PRODUCTION environment:** <https://sis.redsys.es/sis/rest/RTP/checkRtpUsuario>

5.1.2 Output parameters

In this case, the most important fields will be those beginning with **Ds_Rtp**:

- **Ds_RtpStatus:** Indicates whether the client can make a Request to Pay. Its values are 'OK' if possible and 'KO' if not possible. If 'KO' is returned, the '**Ds_RtpResponse**' field must be consulted to verify whether the response received is due to an error or not. For example, if the user has Bizum but not Request to Pay, the '**Ds_RtpResponse**' will come with the code '**BIZ00000**', whereas if the user does not have Bizum, it will contain a different error code.
- **Ds_RtpResponse:** Request to Pay status query request code. If the request is correct, '**BIZ00000**' will be returned. Otherwise, another error code will be returned following the regular expression '^BIZ[\d]{5}\$'.
- **Ds_RtpDescription:** Description of the Request to Pay status query request. If the '**Ds_RtpResponse**' field has a value other than '**BIZ00000**', this field will indicate a description of the reason the request was not successful.

The possible scenarios that may arise are as follows:

- **Client with RequestToPay:** In this case, the call will return **Ds_RtpStatus=OK**, **Ds_RtpResponse=BIZ00000**, **Ds_RtpDescription=Operacion realizada correctamente**
- **Client without RequestToPay but with Bizum:** In this case, the call will return **Ds_RtpStatus=KO**, **Ds_RtpResponse=BIZ00000**, **Ds_RtpDescription=Operacion realizada correctamente**
- **Client without RequestToPay neither Bizum:** In this case, the call will return **Ds_RtpStatus=KO**, **Ds_RtpResponse=BIZ00009**, **Ds_RtpDescription=Ordenante no encontrado**
- **Some sort of error:** If an error occurs, the call will return **Ds_RtpStatus=KO**, **Ds_RtpResponse=BIZXXXXX** (Where XXXXX is the identifier of the error in question) and

Ds_RtpDescription=YYYYY (YYYYY being the detailed description of the error that occurred)

If the parameter "DS_MERCHANT_COF_TXNID" or "DS_MERCHANT_EXCEP_SCA" has been reported, the query will return additional information.

If "DS_MERCHANT_COF_TXNID" is reported, its validity will be checked, and the same field will be returned with "OK" or "KO" depending on its validity.

If "DS_MERCHANT_EXCEP_SCA" is reported, the exemptions supported by the client will be checked and the "DS_EXCEP_SCA" field will be returned with the supported exemptions, as is the case with cards to check the exemptions allowed by the merchant (Section 9.1 of the REST integration guide).

5.1.3 Example

This allows us to generate the following example:

- Payment data (Ds_MerchantParameters before encoding in base64):

```
{
  "DS_MERCHANT_ORDER": "1612280107",
  "DS_MERCHANT_MERCHANTCODE": "999008881",
  "DS_MERCHANT_TERMINAL": "871",
  "DS_MERCHANT_CURRENCY": "978",
  "DS_MERCHANT_AMOUNT": "145",
  "DS_MERCHANT_BIZUM_MOBILENUMBER": "+34700000000"
}
```

This will produce the following response:

- Decoded response data:

```
{
  "Ds_RtpStatus": "OK",
  "Ds_RtpResponse": "BIZ0000",
  "Ds_RtpDescription": "Operation performed correctly",
  "Ds_MerchantCode": "999008881",
  "Ds_Terminal": "871",
  "Ds_Order": "1612280505",
  "Ds_Currency": "978",
  "Ds_Amount": "145"
}
```

5.2 Start RTP payment request via REST

IMPORTANT! If you decide to integrate Bizum via REST, it is **MANDATORY** that you support authentication backup. More information in [point 10](#) of the document.

The Bizum integration flow via REST follows the following scheme:



1. The merchant requests the initiation of Request To Pay.
2. An attempt is made to initiate Request To Pay.
 - a. **The client has RTP active and communication with the entity has been successful:** We respond with the success of the RTP start attempt by sending the field **Ds_RtpResponse=BIZ00000** and **Ds_RtpDescription=Operation performed successfully**
 - b. **Any other situation:** We respond with the RTP initiation attempt error by sending the field **Ds_RtpResponse=BIZXXXXX** (where XXXXX is the identifier of the error in question) and **Ds_RtpDescription=YYYYY** (where YYYYY is the detailed description of the error that occurred).
3. If the RTP start was successful, when the request is confirmed/denied, the system will receive a notification with the result and depending on this and the type of operation to be processed, one action or another will be taken.
 - a. Confirmation:
 - i. Operation type 0: The operation will be authorised, and the status of the operation will be updated with the result of the authorisation.
 - ii. Operation type 7: The operation status will be updated to authenticated and pending authorisation (double-flow Bizum payment).
 - b. Refusal:
 - i. The status of the operation will be updated as refused.
4. Finally, the merchant will be notified of the result of the operation.

5.2.1 Input parameters

In addition to the basic operation data, the following data is required for this integration:

Field	Description	Type	Format
DS_MERCHANT_OPERATIONTYPE	Operation type	Numeric	^\d{1}\$
DS_MERCHANT_PAYMENT_METHODS	Payment method	String	^z\$
DS_MERCHANT_BIZUM_MOBILENUMBER	Client's phone number with prefix	String	^\+[+]?[\d]{5,15}\$ E.g.: +34700000000
DS_MERCHANT_MERCHANTURL	Notification URL	String	URL

The following parameters have specific features:

- **DS_MERCHANT_OPERATIONTYPE:** Only the following values can be specified:
 - **0:** In this case, when correctly notifying the start of Request To Pay, the operation will be authorised directly.
 - **7:** In this case, when the start of Request To Pay is correctly notified, the operation will remain authenticated but pending authorisation, as seen in section 3 of the guide when explaining integration via double flow.
- **DS_MERCHANT_MERCHANTURL:** This parameter is optional if the merchant has configured the Notification URL field in the administration portal. If it is not configured at the terminal level, it must be specified in each call.

As with any type of [REST integration](#), the merchant must send a POST request with the following parameters:

- **Ds_MerchantParameters:** Payment request data encoded in Base64.
- **Ds_SignatureVersion:** Signature algorithm version.
- **Ds_Signature:** Signature generated with the payment data.

The URL where the service is displayed is as follows, depending on the environment:

- **TEST environment:** <https://sis-t.redsys.es:25443/sis/rest/RTP/trataPeticonREST>
- **PRODUCTION environment:** <https://sis.redsys.es/sis/rest/RTP/trataPeticonREST>

5.2.2 Output parameters

In this case, we will differentiate between the response to the RTP initiation request, and the notification sent subsequently when we know the status of the operation if the initiation has been successful.

For the response to the request, the most important parameters are as follows:

Field	Description	Type	Format
Ds_Response	Response to the request	Numeric	^\d{4}\$
Ds_RtpResponse	RTP start response	String	^BIZ\d{5}\$
Ds_RtpDescription	RTP start description	String	^{1,255}\$

Regarding the notification response, it will be a normal notification as would be received in a redirection integration.

5.2.3 Example

This allows us to generate the following example:

- Payment data (Ds_MerchantParameters before encoding in base64):



```
{
  "DS_MERCHANT_ORDER": "1614092745",
  "DS_MERCHANT_MERCHANTCODE": "999008881",
  "DS_MERCHANT_TERMINAL": "871",
  "DS_MERCHANT_CURRENCY": "978",
  "DS_MERCHANT_AMOUNT": "145",
  "DS_MERCHANT_OPERATIONTYPE": "0",
  "DS_MERCHANT_PAYMENTMETHODS": "z",
  "DS_MERCHANT_MERCHANTURL": "https://sis-d.redsys.es/sis-simulador-
web/notificacion/reciboNotif.jsp",
  "DS_MERCHANT_BIZUM_MOBILENUMBER": "+34700000000"
}
```

This will produce the following response:

- Decoded data received:

```
{
  "Ds_Amount": "145",
  "Ds_Currency": "978",
  "Ds_Order": "1614092745",
  "Ds_MerchantCode": "999008881",
  "Ds_Terminal": "871",
  "Ds_Response": "9998",
  "Ds_AuthorisationCode": "",
  "Ds_OperationType": "0",
  "Ds_SecurePayment": "0",
  "Ds_Language": "1",
  "Ds_MerchantData": "",
  "Ds_ProcessedPayMethod": "68",
  "Ds_RtpResponse": "BIZ0000",
  "Ds_RtpDescription": "Operacion realizada correctamente"
}
```

When the RTP is complete, the following notification will be sent:

- Decoded data received:

```
{
  "Ds_Date": "23/02/2021",
  "Ds_Hour": "16:07",
  "Ds_SecurePayment": "1",
  "Ds_Amount": "145",
  "Ds_Currency": "978",
  "Ds_Order": "1614092745",
  "Ds_MerchantCode": "999008881",
  "Ds_Terminal": "871",
  "Ds_Response": "0000",
  "Ds_MerchantData": "",
  "Ds_OperationType": "0",
}
```

```
"Ds_ConsumerLanguage": "1",  
"Ds_AuthorisationCode": "123456",  
"Ds_ProcessedPayMethod": "68"  
}
```

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5.3 Associated error codes

Code	DESCRIPTION
BIZ00000	Operation performed correctly.
BIZ00001	Required input parameter not completed.
BIZ00002	The format of a parameter is incorrect.
BIZ00003	The item was not found.
BIZ00005	Internal system error.
BIZ00006	3DES or MAC security error X9.19
BIZ00007	Operation not permitted.
BIZ00008	Beneficiary not found.
BIZ00009	Sender not found.
BIZ00202	Functionality not yet implemented.
BIZ00213	Authentication error in the request received. Security sequence failure.
BIZ00233	<u>Authentication error. The operation can be backed up.</u>
BIZ00224	The entity's response to RTP authentication is KO.
BIZ00225	Request to pay authentication has not been successfully completed.

6. Testing – REST integration

To assess the different scenarios, you can use the test telephone number +34700000000, conducting operations with different amounts.

Amount	Client with Bizum	Client with RTP	Operation result	Description in RTP query	Description in REST payment
Less than €5	OK	OK	OK	The user's telephone has RTP active. In this range, the client has exemptions and all valid TIDs.	In the initial request, we received a response that it went OK. When reviewing the operation, we will see that it is authenticated.
Between €5 and €10	OK	OK	KO	The user's telephone has RTP active. In this range, the client has no exemptions and all TIDs are invalid.	In the initial request, we receive a response that it went OK. When reviewing the operation, we will see that it is denied.
Between €10 and €15	OK	KO	-	The user's telephone does not have RTP active.	In the initial request, we received a response that it has gone KO. The error reason is BIZ00202.
Over €15	KO	KO	-	The user's phone number does not have BIZUM activated	In the initial request, we received a response that it has gone KO. The error reason is BIZ0009.
Between €75 and €80	OK	OK	OK		In the initial request, we received a response stating that the operation can be backed up. Upon completion of the flow, the operation will remain authorised.
Between €80 and €85	OK	OK	KO		In the initial request, we received a response stating that the operation can be backed up. At the end of the flow, the operation will be denied.

7. Other REST functionalities

7.1 Return without original

This type of operation will allow the merchant to make the refund without the need for an original operation, such as a rebate, a bonus payment, etc., or in special situations such as when the deadline for a refund has passed.

7.1.1 Input parameters

In addition to the basic operation data, the following data is required for this integration:

Field	Description	Type	Format
DS_MERCHANT_OPERATIONTYPE	Operation type	Numeric	^34\$
DS_MERCHANT_PAYMETHODS	Payment method	String	^z\$
DS_MERCHANT_BIZUM_MOBILENUMBER	Client's phone number with prefix	String	^[+]?[\d]{5,15}\$ E.g.: + 34700000000

As with any type of [REST integration](#), the merchant must send a POST request with the following parameters:

- **Ds_MerchantParameters:** Payment request data encoded in Base64.
- **Ds_SignatureVersion:** Version of the signature algorithm.
- **Ds_Signature:** Signature generated with the payment data.

The URL where the service is displayed is as follows, depending on the environment:

- **TEST environment:** <https://sis-t.redsys.es:25443/sis/rest/RTP/trataPeticionREST>
- **PRODUCTION environment:** <https://sis.redsys.es/sis/rest/RTP/trataPeticionREST>

7.1.2 Output parameters

For the response to the request, the standard response from a REST request to the Virtual POS will be obtained, where the most important parameter is the following:

Field	Description	Type	Format
Ds_Response	Response to the request. The value "0900" indicates that the operation has been authorised.	Numeric	^\d{4}\$

7.1.3 Example

This allows us to generate the following example:

- Payment details (Ds_MerchantParameters before encoding in base64):

```
{
  "DS_MERCHANT_ORDER":1724928574,
  "DS_MERCHANT_MERCHANTCODE":"999008881",
  "DS_MERCHANT_TERMINAL":"871",
  "DS_MERCHANT_CURRENCY":"978",
  "DS_MERCHANT_OPERATIONTYPE":"34",
  "DS_MERCHANT_AMOUNT":"145",
  "DS_MERCHANT_PAYMENT_METHODS":"z",
  "DS_MERCHANT_BIZUM_MOBILENUMBER":"3470000000"
}
```

This will produce the following response:

- Decoded data received:

```
{
  "Ds_Amount":"145",
  "Ds_Currency":"978",
  "Ds_Order":"1724928574",
  "Ds_MerchantCode":"999008881",
  "Ds_Terminal":"871",
  "Ds_Response":"0900",
  "Ds_AuthorisationCode":"",
  "Ds_OperationType":"Y",
  "Ds_SecurePayment":"1",
  "Ds_Language":"1",
  "Ds_MerchantData":"",
  "Ds_Bizum_IdOper":"66569849-91c9-41b2-97b2-83cb96718bf",
  "Ds_ProcessedPayMethod":"68",
  "Ds_Control_1724928579058":"1724928579058",
  "Ds_RtpResponse":"BIZ0000",
  "Ds_RtpDescription":"Operation completed successfully"
}
```

8. PSD2 exemptions

At this point, the use of the several types of exemptions in Bizum payments will be explained in different sections.

8.1 MIT operation

To make MIT payments, it will be necessary to subscribe the user to the product and store the resulting TID (operation ID) for later use.

The rules published by issuers require that all operations (Obtain TID & MIT) that are COF be identified, as well as the use (COF type) being made of the credentials. The aim of this new regulation is to reduce the number of refusals to issuers in this type of operation.

8.1.1 TID generation

First, an initial operation (which will always be authenticated) must be conducted to generate the TID to be used in future MIT operations. To do this, the following parameter must be included in the operation (regardless of whether it is conducted via REST or redirection):

Field	Description	Type	Format
DS_MERCHANT_COF_TYPE	COF operation type. Values: "I": Instalments "R": Recurring "H": Reauthorisation "E": Resubmission "D": Delayed "M": Incremental "N": No Show "C": Other	String	^(I R H E D M N C)\$
DS_MERCHANT_COF_INI	First use indicator for COF	String	^S\$

The response to this operation will include a new field indicating the TID generated for use in future MIT operations.

Field	Description	Type	Format
DS_MERCHANT_COF_TXNID	COF operation identifier. Optional. The merchant will receive this identifier as a response in the initial credential storage (CIT) operations. This value must be stored so that it can be sent in subsequent COF authorisations, linking all subsequent operations to their corresponding original. Optionally, it is also possible to receive this value in the response to a subsequent MIT operation. In this case, if the value received is different from the one stored by the merchant, the merchant must store this new value for use in the following linked MITs.	String	^[a-zA-Z0-9]{1,15}\$

8.1.2 Example

- Payment details (Ds_MerchantParameters before encoding in base64):

```
{
  "DS_MERCHANT_ORDER": "1675155813",
  "DS_MERCHANT_MERCHANTCODE": "999008881",
  "DS_MERCHANT_TERMINAL": "871",
  "DS_MERCHANT_CURRENCY": "978",
  "DS_MERCHANT_AMOUNT": "100",
  "DS_MERCHANT_PRODUCTDESCRIPTION": "Test",
  "DS_MERCHANT_OPERATIONTYPE": "0",
  "DS_MERCHANT_PAYMENT_METHODS": "z",
  "DS_MERCHANT_BIZUM_MOBILENUMBER": "+34700000000",
  "DS_MERCHANT_COF_TYPE": "I",
  "DS_MERCHANT_COF_INI": "S",
  "DS_MERCHANT_MERCHANTURL": "https://sis-d.redsys.es/sis-simulador-
web/notificacion/reciboNotif.jsp
}
```

This will produce the following response:

- Decoded data received:

```
{
  "Ds_Amount": "100",
  "Ds_Currency": "978",
  "Ds_Order": "1675155813",
  "Ds_MerchantCode": "999008881",
  "Ds_Terminal": "871",
  "Ds_Response": "9998",
  "Ds_AuthorisationCode": "",
  "Ds_OperationType": "0",
  "Ds_SecurePayment": "0",
  "Ds_Language": "1",
  "Ds_MerchantData": "",
  "Ds_ProcessedPayMethod": "68",
  "Ds_Control_1675155876933": "1675155876933",
  "Ds_RtpResponse": "BIZ0000",
  "Ds_RtpDescription": "SIS-T Operation performed correctly"
}
```

When the RTP is complete, the following notification will be sent:

- Decoded data received:

```
{
  "Ds_Date": "31%2F01%2F2023",
  "Ds_Hour": "10:04",
}
```

```

"Ds_SecurePayment": "1",
"Ds_Amount": "100",
"Ds_Currency": "978",
"Ds_Order": "1675155813",
"Ds_MerchantCode": "999008881",
"Ds_Terminal": "871",
"Ds_Response": "0000",
"Ds_MerchantData": "",
"Ds_OperationType": "0",
"Ds_ConsumerLanguage": "1",
"Ds_AuthorisationCode": "000000",
"Ds_Bizum_TruncatedAccount": "XXXX4000XXXXXXXXXXXX4000",
"Ds_Bizum_IdOper": "93827555114352062300121718191966911",
"Ds_Merchant_Cof_Txnid": "121718191966911",
"Ds_ProcessedPayMethod": "68",
"Ds_Control_1675155882558": "1675155882558"
}

```

8.1.3 MIT Operations

Once the TID has been generated, the merchant can initiate operations without requiring the client to be present.

For these operations, it is not necessary to provide the buyer's phone number, as the TID is sufficient. The following parameters must be provided:

Field	Description	Type	Format
DS_MERCHANT_COF_TXNID	Operation ID	String	^[a-zA-Z0-9]{1,15}\$
DS_MERCHANT_COF_TYPE	COF operation type. Values: "I": Instalments "R": Recurring "H": Reauthorisation "E": Resubmission "D": Delayed "M": Incremental "N": No Show "C": Other	String	^(I R H E D M N C)\$

DS_MERCHANT_COF_INI	First use indicator for COF	String	^N\$
DS_MERCHANT_EXCEP_SCA	Exemption type (MIT)	String	^MIT\$
DS_MERCHANT_DIRECTPAYMENT	Non-secure payment indicator	String	^true\$

NOTE: No validation will be performed on the COF type used between the operation to obtain the TID and the MIT operation. If a different COF type is sent in future MIT payments, the operation may be rejected. The cancellation is made by the issuer. Each issuer may have its own criteria and perform its own validations. In addition, these may evolve over time and start without validation and then begin to validate. This already occurs in card payments.

8.1.3.1 Example

Based on the example of TID generation,

- Payment data (Ds_MerchantParameters before encoding in base64):

```
{
  "DS_MERCHANT_ORDER": "1675156044",
  "DS_MERCHANT_MERCHANTCODE": "999008881",
  "DS_MERCHANT_TERMINAL": "871",
  "DS_MERCHANT_CURRENCY": "978",
  "DS_MERCHANT_AMOUNT": "100",
  "DS_MERCHANT_PRODUCTDESCRIPTION": "Test",
  "DS_MERCHANT_OPERATIONTYPE": "0",
  "DS_MERCHANT_PAYMENT_METHODS": "z",
  "DS_MERCHANT_COF_TYPE": "I",
  "DS_MERCHANT_COF_INI": "N",
  "DS_MERCHANT_COF_TXNID": "121718191966911",
  "DS_MERCHANT_DIRECTPAYMENT": "true",
  "DS_MERCHANT_EXCEP_SCA": "MIT",
  "DS_MERCHANT_MERCHANTURL": "https://sis-d.redsys.es/sis-simulador-
web/notificacion/reciboNotif.jsp
}
```

This will produce the following response:

- Decoded data received:

```
{
  "Ds_Amount": "100",
  "Ds_Currency": "978",
  "Ds_Order": "1675156044",
  "Ds_MerchantCode": "999008881",
}
```

```

"Ds_Terminal": "871",
"Ds_Response": "0000",
"Ds_AuthorisationCode": "",
"Ds_OperationType": "0",
"Ds_SecurePayment": "0",
"Ds_Language": "1",
"Ds_MerchantData": "",
"Ds_Merchant_Cof_Txnid": "121718191966911",
"Ds_ProcessedPayMethod": "68",
"Ds_Control_1675156081359": "1675156081359"
}

```

8.2 Other exemptions (TRA and LWV)

To enable a payment in which the client does not perform the strong authentication process, the use of exemptions is enabled, which may be proposed by the merchant.

The following exemptions are permitted:

- **TRA** (Operation Risk Analysis): this exemption is based on an operation risk analysis by the acquirer/merchant.
- **LWV** (Low value operation): exemption for low amounts (up to €30, with a maximum of 5 operations or €100 accumulated per client; these counters are controlled at the issuing entity level).

8.2.1 First exemption request

Upon the first exemption request for a client at a merchant (1:1 ratio), the proposal will not be considered, and a standard payment request will be sent.

If the operation is completed successfully and the operation is conducted, the information will be stored for subsequent checks.

To request the use of exemptions, the merchant must include the following parameter in the payment request:

Field	Description	Type	Format
DS_MERCHANT_EXCEP_SCA	Exemption type	String	^(TRA LWV)\$

8.2.2 Subsequent requests

Once it has been identified that the user has made a non-exempt purchase at the merchant making the request, the relevant merchant validations will be conducted and once passed, the exemption proposal submitted by the merchant will be forwarded to the client's financial entity.

The financial entity must complete the authentication process, being free to accept or reject the exemption, and will send the completion of authentication through the usual channel, where it will be transferred if the proposed exemption has been applied or not.

To request the use of exemptions, the merchant must include the following parameter in the payment request:

Field	Description	Type	Format
DS_MERCHANT_EXCEP_SCA	Exemption type	String	^(TRA LWV)\$

Depending on whether the exemption is accepted or not, the following parameter will be transferred to the merchant in the response:

Field	Description	Type	Format
Ds_SecurePayment	Indicates responsibility for the operation: <ul style="list-style-type: none"> - 1: Secure operation, issuer responsibility - 0: Non-secure operation, merchant liability (Exemption accepted) 	String	^(0 1)\$

9. Management of Bizum operations from the Virtual POS Administration Portal

The Virtual POS Administration Portal allows you to query and refund Bizum operations.

9.1 Bizum Operation Query

From the operation query option in the Virtual POS Administration Portal, you can obtain details of Bizum operations. In the "Options" section, clicking on the Bizum icon will display the operation details, as shown in the following image:

The screenshot displays the Redsys Virtual POS Administration Portal interface. On the left, a sidebar menu shows the user 'JAVIER' and various navigation options. The main area contains a search form with fields for 'Nº de comercio' (999000081), 'Nº de terminal' (810), and 'Tipo consulta' (Estado y tipo). Below the search form, there are filters for 'Estado operación' (Autorizadas) and 'Tipo' (with a dropdown menu). A date range filter is set from 06-11-2019 to 05-11-2019, and time filters are set for 'Hora Inicio' (17:16) and 'Hora Fin' (23:59). A table lists the search results, with one entry highlighted:

Fecha	Nº de terminal	Tipo operación	Número de pedido	Resultado operación y código	Importe	Tipo de pago	Tipo
06/11/2019 17:18:19	810	Autorización	191106171525	Autorizada	2,50 EUR	Bizum	Bizum

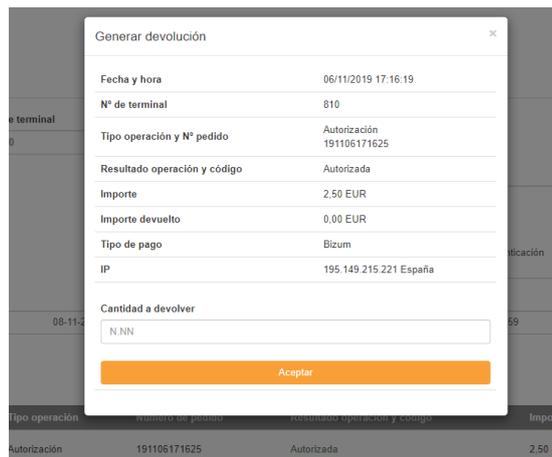
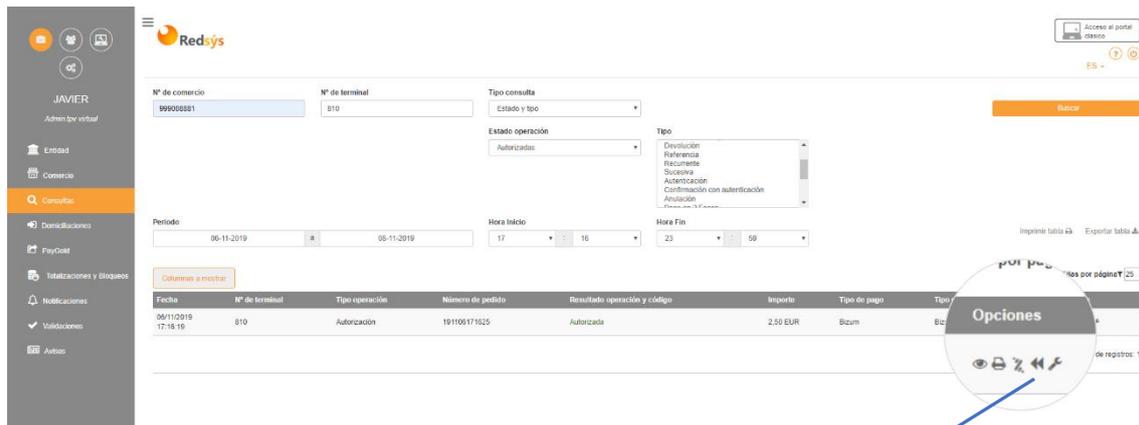
An 'Opciones' (Options) menu is visible over the table, with a blue arrow pointing to the Bizum icon. This icon is used to view the details of the selected operation. The 'Detalle Bizum' window shows the following information:

- Identificador de operación: 446927018478218566968956584292581
- Código de estado: CJO0000
- Descripción: Operación realizada correctamente

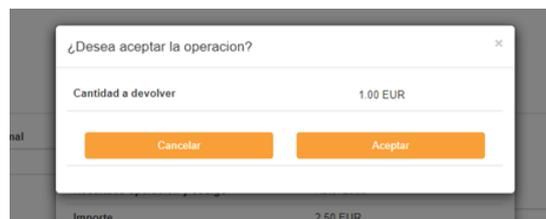
The background shows the search form with 'Nº de terminal' set to 810 and 'Estado operación' set to Autorizadas.

9.2 Bizum Operation Returns

From the operation query option in the Virtual POS Administration Portal, you can return Bizum operations, provided that the Portal user has permission to make refunds. In the "Options" section, clicking on the "Double Arrow" icon opens a pop-up window where you can specify the refund details, as shown in the following image:



Once you have specified the amount to be refunded, an operation confirmation box will appear, as shown in the following image:



HTML integration consists of including a complete HTML form provided by Bizum within the merchant's flow. The merchant must present the client with a standard form defined by Bizum. In this form, the client will enter the received OTP to authenticate the operation.

In template integration, Bizum provides the necessary elements for the merchant to build their own form. Fields included:

- **challengeInfoText:** Code received on the mobile phone.
- **submitAuthenticationLabel:** Text that will be displayed on the form submission button.
- **IssuerImage:** Issuer's logo.
- **idOperacion:** Operation identifier.
- **bizumImage:** Bizum logo.

10.1 Invoke backup

Regardless of whether the merchant decides to integrate the backup via HTML or template, they must call this service so that the OTP is sent to the client, which is necessary to validate the backed-up authentication.

The flow for invoking backup in Bizum follows this pattern:

1. The merchant requests the invocation of the backup.
2. An attempt is made to invoke the backup.
 - We respond with the success of the backup invocation by sending the field **Ds_RtpResponse=BIZ00000** and **Ds_RtpDescription=Operacion realizada correctamente**.
 - We respond with the backup invocation error by sending the field **Ds_RtpResponse=BIZXXXXX** (where XXXXX is the identifier of the error concerned) and **Ds_RtpDescription=YYYYY** (where YYYYY is the detailed description of the error that occurred).
3. If the backup invocation was successful, there will be two bifurcations, depending on whether the merchant decided to back up the operation using the template or HTML.
 - **Template:** If the backup is supported using the template integration, the merchant must ask the client for the OTP that they should have received after the merchant invoked the backup. The merchant must then call the **backup validation** service to complete the client's authentication.
 - **HTML:** If backup is performed using HTML integration, the merchant must display the OTP receipt form included in the **Ds_RtpBackupTemplate** field, and when the client enters the OTP in that form, the operation will be automatically authenticated without the merchant having to call the backup validation service.

10.1.1 Input parameters

The input parameters for initiating backup are the basic data of an operation, in addition to the following:

Field	Description	Type	Format
DS_MERCHANT_BIZUM_MOBILENUMBER	Client's phone number with prefix	String	^[+]?[\d]{5,15}\$ E.g.: +34700000000
DS_MERCHANT_OTP	Code sent to client	Numeric	

Please note that the **DS_MERCHANT_ORDER** must be the same as the one used in the backup call operation.

The URL where the service is displayed is as follows, depending on the environment:

- **TEST environment:** <https://sis-t.redsys.es:25443/sis/rest/RTP/validarRespaldoUsuarioRTP>
- **PRODUCTION environment:** <https://sis.redsys.es/sis/rest/RTP/validarRespaldoUsuarioRTP>

10.2.2 Output parameters

- **Ds_RtpStatus:** Indicates whether the backup has been invoked. Values are 'OK' if successful and 'KO' if unsuccessful. If 'KO' is returned, the 'Ds_RtpResponse' field should be consulted to verify whether the response received is due to an error or not.
- **Ds_RtpResponse:** Backup invocation request code. If the request is correct, 'BIZ00000' will be returned. Otherwise, another error code will be returned following the regular expression '^BIZ[\d]{5}\$'.
- **Ds_RtpDescription:** Description of the backup invocation request. If the 'Ds_RtpResponse' field has a value other than 'BIZ00000', this field will indicate a description of the reason the request was not successful.

10.2.3 Example

- Input example
- Encoded data:

```
{
  "Ds_MerchantParameters":
  "eyJEU19NRVJDSEFOVF9NRVJDSEFOVENPREUI0iI50TkWMDg40DEiLCJEU19NRVJDSEFOVF9URVJ
NSU5BTCi6IjgxMCI5IkRTX01FUkNIQU5UX09SREVSijoiMTc2NTc5NjAzNyIsIkRTX01FUkNIQU5
UX0NVU1JFTkNZIjoioTc4IiwifRfTUVSQ0hBT1RfQU1PVU5UIjoInzYwMCI5IkRTX01FUkNIQU5
UX0JJWlVNX01PQklMRU5VTUJFUiI6IiszNDcwMDAwMDAwMCI5IkRTX01FUkNIQU5UX09UUCI6MTI
zNH0",
  "Ds_Signature": "gIiiPvyXmN1ZQcDW63Nt98PmGAEtXZeulpg_-
W_OnVCCx9fExT6I946ZCbQY9ZRl7lzFAkgfKuL4xShLas1XUA",
  "Ds_SignatureVersion": "HMAC_SHA512_V2"
}
```

- Decoded data:



Furthermore, the REDSYS client service centre does not provide consulting services (enquiries about the code to be developed to connect to the Virtual POS).

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