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ONE API Integration Guide

BASIC integration

V. 2.2

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Contents

1 Document history

Date	Version	Author	List Updates	Paragraph
27/02/2015	1.0	DOCOMO Digital	Initial Release	2
07/04/2015	1.1	DOCOMO Digital	Errata Corrige: amountCharged is not a mandatory response parameter	4.4.3 5.6.1
			Added "maskedMsisdn" property in userId object	4.4.3 5.6.1 5.6.3
25/08/2015	1.2	DOCOMO Digital	Added "userId" and "telco" parameters in identification flow callback	4.4.5
28/10/2015	1.3	DOCOMO Digital	Added "refundedTransactionCode" in refund callback	4.5.2
			Added "subscriptionCode" and "requestId" in unsubscribe callback	5.6.2
			Added "callbackUrl" parameter in unsubscribe button	5.2
08/03/2016	1.4	DOCOMO Digital	Added StarHub Telco for Singapore	
24/03/2016	1.5	DOCOMO Digital	Moved Iframe integration to a dedicated section	10.2
			Added Basic+ integration	10.2
			Added "identify" and "purchase from token" flows	4 4.2 4.3 4.4.5 4.5.1
			Added optional parameter "customParams" in all flows.	4.1 4.2 4.3 5.1 5.2 5.3 5.4 6.1
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26/09/2016	1.7	DOCOMO Digital	Added new renew API for delegated subscriptions	5.5
			Added new userId change and userid deactivation asynchronous notifications	4.5.3 4.5.4
			Added new sendSMSTrusted API	9.2
			Added optional styleName parameter	4.1 4.2 4.3 5.1 5.2 5.4 6.1
			Moved Appendixes related to country coverage in a separate document (ONE API coverage)	
20/02/2017	1.8	DOCOMO Digital	Added optional parameters "language" and "messageParams"	4.1 4.2 4.3 5.1 5.2 5.3 5.4 6.1
			Added error codes ERR_0007/ERR_9995, ERR_0007/ERR_9994 and ERR_0006/ERR_9920	11
			Documented the infoToDisplay optional parameter.	4.4.4 4.4.5 5.6.1 5.6.2 5.6.3

31/07/2017	1.9	DOCOMO Digital	Added security note.	4.4.4
			Added new optional parameter paymentMethod in purchase, identify, subscribe and getAll flows	4.1 4.2 5.1 5.3
09/10/2017	2.0	DOCOMO Digital	Added link to download the public key to be used for digital signature validation of notifications.	4.4.1
15/03/2018	2.1	DOCOMO Digital	New feature: secure buttons	7
02/05/2019	2.2	DOCOMO Digital	Added new error codes ERR_0552, ERR_0553	11

2   Introduction

DOCOMO Digital provides a global payment platform that enables Mobile Network Operator Billing in e-commerce / mobile commerce sites.
This step-by-step guide describes how to integrate DOCOMO Digital payment platform in your website, allowing one-off payments and subscriptions.
With the BASIC integration, the payment pages will be hosted and managed by DOCOMO Digital. Some graphical customizations are allowed as described in the next paragraph.

For the full list of price points available and countries and Operators coverage you should ask the last version of the "ONE API coverage" document to the DOCOMO Digital Business team.

2.1 Purchase experience customization

The layout of the payment pages can be customized by the Merchant. The list of graphical elements that can be customized, like background color, buttons color, text color, merchant logo and product image, depend on the country. Several custom layouts can be saved for each website and can be used at the same time, on different purchase buttons.
In order to customize a layout, the Merchant has to obtain an authorization by DOCOMO Digital Team in order to enable and set up this option on a website base. Each custom layout defined by the Merchant requires an explicit approval flow before to be used in any purchase flow.

In order to apply a custom purchase experience layout, the merchant must add in the purchase button a valid and approved "styleName" parameter (otherwise will be shown the standard not customized layout), see example below:

<input type="hidden" name="styleName" value="mystyle123">

The "styleName" identify a set of graphical properties (colors, images, etc) that will be applied at runtime to the purchase experience.
The "styleName" can be configured in the Merchant portal, under the "Style" page.

3 Merchant set-up process

This section briefly goes through the administrative process of setting up a merchant.
To start selling digital goods a new Merchant has to:

1. Register through the registration form on http://cashlog.com/ website

2. Login to the Merchant private area, go to "My Account" page and fill in the necessary information (contact emails, IBAN…)

3. Go to "My shop" page and add one or more websites with all related information

4. Require an approval for each website inserted. When approved, the Merchant can go online.

3.1 Registering as a Merchant

You can register as a Merchant from http://cashlog.com/ website. Be ready to provide the following information:

- First Name
- Surname
- Email Address
- Password
- Country
- Telephone number
- Company name
- VAT Number
- Website

After completing the registration, you will be assigned:

- A merchant identification code
- A private area on http://cashlog.com/ website, where you can receive real-time information on your transactions, download reports and perform administrative tasks.

3.2 Providing contact and bank information

Before starting to make real business you have to specify some contact and invoicing info. Please login into your private area on http://cashlog.com/ and fill in the following fields in "My Account" page:

Merchant Contact info:

- Email CC Address
- Technical Support Telephone number
- Email technical support
- Email Finance Office

Bank transfer:

- Bank name and address
- Payable to
- Iban
- Country
- Swift

3.3 Configuring web sites

Having registered as a merchant, you need to provide information about the websites under your possession that you would like to integrate with the billing system.
For each site, you have to declare the following information:

- Site Name: name of the site

- URL: URL of the site

- Logo: optional logo/banner to be shown in the payment pages. It should be a gif, png or jpeg image with a preferred size of 190x60 pixels. If this field is not set, no banner will be displayed. Note that this feature may not be available for all mobile operators.

- Billing countries: the list of countries where you would like to enable Operator billing for this site. In order to speed up the approval process, we suggest you to create one site for each billing country.

- Adult content: select "yes" only if the site provides explicit content (erotic / sexual), otherwise select "no"

- Are you interested in selling subscriptions through this site? Select yes if you plan to sell subscription services (recurrent payments)

- Asynchronous Notification URL: (not mandatory) if you fill in this field, DOCOMO Digital platform will call this URL to send asynchronous notifications. Asynchronous notifications are described in section 4.5

- Customer care phone number: (not mandatory) if you have a customer care phone line, insert the phone number here

Each web site will be assigned a unique identification code.

3.4 Requesting website approval

Having registered your web sites on cashlog.com, you should contact DOCOMO Digital Business Team to start the website approval process and provide all the info needed.
Once the site is approved by DOCOMO Digital and by the Mobile Network Operators, DOCOMO Digital Technical Team will enable payments through the platform.

4 Non-recurrent payments

To integrate non-recurrent payments on your website you need to develop key elements, plus an optional but recommended one:

1. **Purchase button**: this is a simple HTML form with an action URL on pay.cashlog.com. Submitting it, the user will start the purchase process.

2. **User identification button (optional)**: You may need to identify users visiting your site, for example to understand if they have already purchased a product or not. A user identification button can help in this respect, but alternative solutions exist.

3. **Purchase from token button (optional)**: if you executed an identification flow, you will be granted a one-time token that you can use to complete a purchase process without repeating the steps already done during the identification flow.

4. **Callback page**: after the user completes the purchase on pay.cashlog.com, we will return him to this page on your site. The POST parameters passed to this page contain the result of the purchase process.

5. **Notification listener (optional)**: whenever a purchase flow is completed (with success or not), and whenever a refund is made on a previously charged transaction, DOCOMO Digital platform will send an asynchronous, server to server call to your site. The URL is the one defined in the site configuration (see section 4.5). The POST parameters passed to this page contain the result of the purchase or refund process.

4.1 Purchase button

This is a complete example of a purchase button:

```
<form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=purchase">
 <input type="hidden" name="countryCode"  value="ZA">
 <input type="hidden" name="siteCode"     value="ST_ZA_0001">
 <input type="hidden" name="productName"  value="MyProductName">
 <input type="hidden" name="price"        value="6.00">
 <input type="hidden" name="currencyCode" value="ZAR">
 <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"   value="Purchase">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Description
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=purchase 2. https://pay.cashlog.com/dynamicpe/flow?flow=purchase HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition. HTTPS is recommended to minimize the risk of frauds to the customer.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country. For example, if you

		want to charge the user with a Russian operator, you should set the code to "RU"
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes	Product name. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice. DOCOMO Digital team will assist you in selecting a suitable value.
price	Yes	Product price. Use a '.' as the decimal separator. Up to two decimal places are supported (e.g. 2.00).
currencyCode	Yes	Three letters currency code for this price (e.g. EUR). http://www.currency-iso.org/dam/downloads/lists/list_one.xls
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button. The value can be any string (e.g. purchase)
requestId	No	A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform and DOCOMO Digital. Maximum length is 250 characters.
notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMO Digital platform.
minimizeRedirections	No	This may have two possible values: • "false" • "true" The default is "false". The purchase flows on pay.cashlog.com perform some internal redirections to ensure a smooth user experience even if the user clicks the "Back", "Forward" and "Refresh" browser buttons in the middle of a purchase. They also guarantee clean URLs and cross-tab safety (i.e., you can have multiple independent flows running in different tabs of the same browser). If minimizeRedirections is set to true, most of these internal redirections will be skipped. As a consequence, "Back", "Forward" and "Refresh" will still work, but the user browser may prompt for confirmation questions like "Are you sure you want to resubmit this form?"; cross tab safety is not always guaranteed. The recommendation is to set this parameter to true if you are mainly acquiring via mobile 3G network, because it will make the user experience much faster. On a wifi or web connection it's safer to keep the parameter to false.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.
paymentMethod	No	If null, it's assumed to be telephone carrier billing. Possible values are: • DCB: carrier billing • CreditCard: Credit Card payment

4.2 User identification button

This button allows the user to retrieve the user identifier on the operator network (typically MSISDN or an anonymous customer reference), it will generate a ticket that can be used to follow a purchase process without re-entering the information provided in the identification flow. Please notice that this flow has some limitations:

1. If mobile number recognition is not available from the operator, but at the same time it's not necessary for completing a purchase, the flow will return a "not identified" status but still generate a token.

2. If the user is connected via web or WIFI, the user will be asked to enter his MSISDN.

For this reasons you should evaluate a backup mechanism for identifying your users: a cookie for example or saving the MSISDN and subscription code in the user's profile on your side.

```
<form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=identify">
 <input type="hidden" name="countryCode"  value="ZA">
 <input type="hidden" name="siteCode"     value="ST_ZA_0001">
 <input type="hidden" name="productName"  value="MyProductName">
 <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"   value="Identify">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Documentation
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=identify 2. https://pay.cashlog.com/dynamicpe/flow?flow=identify HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition. HTTPS is recommended to minimize the risk of frauds to the customer.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country.
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes	Product name. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice. DOCOMO Digital team will assist you in selecting a suitable value.
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button. The value can be any string (e.g. purchase)
requestId	No	A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform and DOCOMO Digital. Maximum length is 250 characters.
notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMO Digital platform.

minimizeRedirections	No	This may have two possible values: • "false" • "true" The default is "false". The purchase flows on pay.cashlog.com perform some internal redirections to ensure a smooth user experience even if the user clicks the "Back", "Forward" and "Refresh" browser buttons in the middle of a purchase. They also guarantee clean URLs and cross-tab safety (i.e., you can have multiple independent flows running in different tabs of the same browser). If minimizeRedirections is set to true, most of these internal redirections will be skipped. As a consequence, "Back", "Forward" and "Refresh" will still work, but the user browser may prompt for confirmation questions like "Are you sure you want to resubmit this form?"; cross tab safety is not always guaranteed. The recommendation is to set this parameter to true if you are mainly acquiring via mobile 3G network, because it will make the user experience much faster. On a wifi or web connection it's safer to keep the parameter to false.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.
paymentMethod	No	If null, it's assumed to be telephone carrier billing. Possible values are: • DCB: carrier billing • CreditCard: Credit Card payment

4.3 Purchase from token button

If a user identification flow returns an "authToken" parameter, you can use it to start a purchase flow without repeating the steps already performed in the identification flow.
Here is an example of a purchase from token button:

```
<form method="POST"
    action="http://pay.cashlog.com/dynamicpe/flow?flow=purchase-from-token">
 <input type="hidden" name="authToken"   value="a5d1-4fb0-91c5-4f7482028c38">
 <input type="hidden" name="countryCode" value="ZA">
 <input type="hidden" name="siteCode"    value="ST_ZA_0001">
 <input type="hidden" name="productName" value="MyProductName">
 <input type="hidden" name="price"       value="6.00">
 <input type="hidden" name="currencyCode" value="ZAR">
 <input type="hidden" name="callbackUrl" value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"  value="Purchase">
</form>
```

Here follows the complete documentation of all form parameters:

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Name	Mandatory	Documentation
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=purchase 2. https://pay.cashlog.com/dynamicpe/flow?flow=purchase HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition. HTTPS is recommended to minimize the risk of frauds to the customer.
authToken	Yes	Authorization token obtained from a previous identify flow. If a site is configured to sell both single purchase and subscription products, you may also pass the token generated by a getAll flow. Normally, a token can be used for just one purchaseFromToken request. Under specific agreements DOCOMO Digital and Operators may allow the reuse of the token for multiple purchases ("persistent tokens"). Persistent tokens can be subject to expiration after an amount of time that depends on the operator.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country.
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes	Product name. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice. DOCOMO Digital team will assist you in selecting a suitable value.
price	Yes	Product price (per period). Use a '.' as the decimal separator (e.g. 2.00). Up to two decimal places are supported.
currencyCode	Yes	Three letters currency code for this price. (e.g. EUR) http://www.currency-iso.org/dam/downloads/lists/list_one.xls
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button. The value can be any string (e.g. purchase)
requestId	No	A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform and DOCOMO Digital. Maximum length is 250 characters.
notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMO Digital platform.
minimizeRedirections	No	This may have two possible values: • "false" • "true" The default is "false". the purchase flows on pay.cashlog.com perform some internal redirections to ensure a smooth user experience even if the user clicks the "Back", "Forward" and "Refresh" browser buttons in the middle of a purchase. They also guarantee clean URLs and cross-tab safety (i.e., you can have multiple independent flows running in different tabs of the same browser).

		If minimizeRedirections is set to true, most of these internal redirections will be skipped. As a consequence, "Back", "Forward" and "Refresh" will still work, but the user browser may prompt for confirmation questions like "Are you sure you want to resubmit this form?"; cross tab safety is not always guaranteed. The recommendation is to set this parameter to true if you are mainly acquiring via mobile 3G network, because it will make the user experience much faster. On a wifi or web connection it's safer to keep the parameter to false.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.

4.4 Callback page

After the user completes a "purchase", "identification" or "purchase from token" flow on pay.cashlog.com, it will return to the callback page defined in the "callbackUrl" parameter of the respective button.
Requests to this page are sent with POST method and with "application/x-www-form-urlencoded" media type.
The POST parameters received are exactly the same of a non-recurrent payment, as described in section 4.4.1 . The digital signature algorithm is also the same described in section 4.4.2 .
Having verified the signature, you should extract and the value of the "response" POST parameter. This is a JSON-encoded object containing a "responseType" property. The responseType would be:

- PURCHASE: for "purchase" and "purchase from token" buttons

- IDENTIFY: for "identification" buttons

In the following sections you will find the format of the JSON objects in these three cases.

4.4.1 Request format

After the user completes a purchase flow on pay.cashlog.com, it will return to the callback page defined in the "callbackUrl" parameter of the purchase button.
Requests to this page are sent with POST method and with "application/x-www-form-urlencoded" media type.
The public key to verify notification can be downloaded from the following link: https://payments.vodafone.com.au/portal/download/publickeys/dcb-public-key.pem
You will receive the following request parameters:

Name	Description
response	This parameter contains a JSON object with the result of the purchase operation.
oauth_token	This parameter is always empty.

oauth_consumer_key	This parameter has a fixed value "MPay".
oauth_version	This parameter has a fixed value "1.0".
oauth_nonce	This parameter has a random hexadecimal value.
oauth_timestamp	This parameter is the UNIX timestamp of the request generation.
oauth_signature_method	This parameter has a fixed value "RSA-SHA1"
oauth_signature	This is the OAuth 1.0 signature of the request. It's signed using Cashlog private key and can be verified using Cashlog public SSL certificate.

4.4.2 Signature validation

The first thing to do when receiving this request is to check its authenticity. This can be easily accomplished validating the included OAuth 1.0 signature. There are several libraries in various languages that can perform this task for you. The exact algorithm to be used is published in RFC 5849.

4.4.3 Response parsing

Then next step is to check the content of the response parameter. This is an example of the content of this field (after having being URL-decoded).

```
{
        "responseType": "PURCHASE",
        "final": true,
        "status": "BILLED",
        "transactionCode": "d2965ed0-e0ab-4a94-9e3e-5ce395",
        "purchaseCode": "15057",
        "amountCharged": 6,
        "mainErrorCode": null,
        "detailedErrorCode": null,
        "errorDescription": null,
        "requestId": null,
        "notes": null,
        "userId": {
                "msisdn": "+27123456789",
                "alias": null
        },
        "telco": {
                "code": "VCOM",
                "name": "Vodacom"
        },
        "infoToDisplay": {
                "site": {
                        "siteCcNumber": "0123456789",
                        "name": "Demo site SouthAfrica",
                        "url": "http:\/\/www.mysouthafricansite.com"
                },
                "product": {
                        "price": "6.00",
                        "currencyCode": "ZAR",
                        "name": " MyProductName",
                        "isSubscription": false
                },
                "telco": {
                        "name": "Vodacom",
                        "code": "VCOM"
                },
                "merchant": {
                        "name": "South Africa test merchant"
                },
                "userId": {
                        "msisdn": "+27123456789"
```

```
            }
        }
}
```

The properties of the JSON depend on the content of the "responseType" parameter.

4.4.4 Purchase response

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "PURCHASE"
final	Boolean	Yes	Will be true
status	String	Yes	"BILLED", "PENDING_NOTIFICATION" or "ERROR" "BILLED" means that the user has been charged. The amountCharged parameter will then contain the exact amount charged. "PENDING_NOTIFICATION" means that DOCOMO Digital platform is waiting to receive a notification from the operator with the result of the operation. This notification can be forwarded to the merchant if asynchronous notifications are enabled. "ERROR" means that the user could not be charged.
purchaseCode	String	No	A five-digits receipt number of the purchase. It's present only if the status is BILLED.
amountCharged	String	No	It is the actual amount billed to the final user and may differ from the price passed in input. It's null or missing in case of billing failure.
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action. It's present if status is ERROR.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action. It's present if status is ERROR.
errorDescription	String	No	Human readable description of the error occurred. It's present if status is ERROR.
transactionCode	String	Yes	Unique identifier of the transaction. May not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
requestId	String	No	A unique identifier of the purchase transaction generated by the merchant. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
notes	String	No	Optional pass-through parameter. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
userId	UserId	No	The object represents the User identifier on the Telco systems.
telco	Telco	No	The object represents the Operator used during the flow.

infoToDisplay	Map	No	Additional information on the purchase. Can be safely ignored.

The Telco object has the following properties:

Property	Type	Mandatory	Description
code	String	Yes	Unique identifier of the Operator. Refer to the "ONE API coverage" document for the full list.
name	String	Yes	Human readable Operator name. Refer to the "ONE API coverage" document for the full list.

The userId object has the following properties:

Property	Type	Mandatory	Description
msisdn	String	No	MSISDN in international format.
maskedMsisdn	String	No	MSISDN in international format, with some digits masked for privacy reasons.
alias	String	No	A telco-assigned alias that identifies the user during the purchase transaction.
userProfile	String	No	Billing profile of the user. Most operators do not disclose this information. Can be: – "prepaid" – "postpaid" – "corporative"
customerId	String	No	Unique, anonymous identifier of the end-user. Most operators do not disclose this information.

We strongly recommend that you verify if the values in response parameters to ensure that they match the requests sent. In case you notice a manipulation, please invalidate the request by sending a refund request or contact us for support.

4.4.5 Identification response

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "IDENTIFY"
status	String	Yes	"IDENTIFIED", "NOT_IDENTIFIED" or "ERROR"
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action. It's present if status is ERROR.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action. It's present if status is ERROR.
errorDescription	String	No	Human readable description of the error occurred. It's present if status is ERROR.
transactionCode	String	Yes	Unique identifier of the transaction. May not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
requestId	String	No	A unique identifier of the purchase transaction generated by the merchant. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
notes	String	No	Optional pass-through parameter. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request

			validation errors (e.g. incorrect media type, syntactically invalid request...)
authToken	String	No	Authorization token. This can be used as an input for purchaseFromToken API. If the site is configured to sell both single purchase and subscription products, you may use this token also for subscription/subscribeFromToken API. Normally, a token can be used for just one purchaseFromToken or subscribeFromToken request. Under specific agreements DOCOMODigital and operators may allow the reuse of the token for multiple purchases ("persistent tokens"). Persistent tokens can be subject to expiration after an amount of time that depends on the operator.
userId	UserId	No	User identity. It's present only if the status is "IDENTIFIED".
telco	Telco	No	Telco operator. It's present only if the status is "IDENTIFIED".
infoToDisplay	Map	No	Additional information on the purchase. Can be safely ignored.

The Telco object has the following properties:

Property	Type	Mandatory	Description
code	String	Yes	Unique identifier of the Operator. Refer to the "ONE API coverage" document for the full list.
name	String	Yes	Human readable Operator name. Refer to the "ONE API coverage" document for the full list.

The userId object has the following properties:

Property	Type	Mandatory	Description
msisdn	String	No	MSISDN in international format.
maskedMsisdn	String	No	MSISDN in international format, with some digits masked for privacy reasons.
alias	String	No	A telco-assigned alias that identifies the user during the purchase transaction.
userProfile	String	No	Billing profile of the user. Most Operators do not disclose this information. Can be: – "prepaid" – "postpaid" – "corporative"
customerId	String	No	Unique, anonymous identifier of the end-user. Most Operators do not disclose this information.

4.5 Notification listener

The notification listener page is a page on your server that will receive data in the same format of the callback page (see section 4.4): data is sent in a POST request with MIME type application/x-www-form-urlencoded, and you will receive the same POST parameters that are present in the callback page.
Upon receiving a notification, you should validate the digital signature to make sure that the notification is authentic: the algorithm is the same explained in section 4.4.2 .
Then you should unserialize the JSON data contained in the "response" POST parameter. You will always find a property named "responseType". Depending on the value of this property you can understand which type of notification you can understand which type of notification you're

receiving and how to parse the rest of the JSON object. After processing the notification you should return us a response with an HTTP 200 status. The content of the response will be ignored by the DOCOMO Digital server.

If we do not receive any response from the notification listener, or if the response has an HTTP status different from 200, we will retry to send the notification. We will do a retry every 10 minutes for the first hour, and one every hour in the following 23 hours. The retry expires 24 hours after the first notification attempt.

4.5.1 Purchase and identification notifications

Using the callback page to receive information on the purchases may not be sufficient. The POST to the callback page is done by the user's browser: this allows a smooth user experience, but is sometimes unreliable. If the network is congested, or the user closes the browser, the user may still be billed, but the callback never reaches your site, so you will be unaware of the result of the operation.

To improve the situation you have two options:

1. Access to cashlog.com portal and download the daily transaction reports

2. Implement a listener for asynchronous notifications

The first option is typically easier and more stable, being a batch process. The second is more complex but allows almost real-time management of the billing events.

To receive asynchronous notifications, you should implement a notification listener as explained in in section 4.5 . The notification payload is carried in the "response" POST parameter. This contains a JSON string that must be unserialized.

In case of purchase notifications, the "responseType" property in the JSON will have a "PURCHASE" value. The format of the JSON object will be the same described in section 4.4.3 .

In case of identification notifications, the "responseType" property in the JSON will have a "IDENTIFY" value. The format of the JSON object will be the same described in section 4.4.5 .

4.5.2 Refund notification

A successful transaction may be later refunded at the user's request. DOCOMO Digital platform will inform you in two ways:
1. Through cashlog.com portal and daily transaction reports

2. Through an asynchronous notification

A refund notification is received in the same way of a purchase notification (section 4.5.1). You need to validate the digital signature then unserialize the JSON data contained in the "response" POST parameter.

In this case the JSON has a "responseType" parameter whose value is "REFUND". This allows to tell apart a billing and a refund notification.

The JSON object contains the following properties:

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "REFUND"
status	String	Yes	Can be: – REFUNDED: the full amount of the transaction has been refunded – PARTIALLY_REFUNDED: a fraction of the transaction price has been refunded. This can only happen if the "price" and "currencyCode" parameters were present in input.

			– PENDING_NOTIFICATION: a refund request has been accepted but not processed yet. You will receive an asynchronous notification with the final status – ERROR: the refund operation failed
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action. It's present if subscriptionStatus is ERROR.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action. It's present if subscriptionStatus is ERROR.
errorDescription	String	Yes	Human readable description of the error occurred. It's present if subscriptionStatus is ERROR.
transactionCode	String	Yes	Unique identifier of the transaction. May not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
requestId	String	Yes	A unique identifier of the purchase transaction generated by the merchant. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
notes	String	No	Optional pass-through parameter. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
amountRefunded	Float	Yes	Amount refunded to the user
currencyCode	String	Yes	ISO 4217 alphabetic currency code (letters, uppercase). http://www.currency-iso.org/dam/downloads/lists/list_one.xls
refundedTransactionCode	String	Yes	Code of the refunded transaction

4.5.3 UserId change notifications

This notification is sent when a user decides to change his MSISDN (internal portability). DOCOMO Digital platform will automatically update the MSISDN of all active subscriptions and persistent tokens, so normally no action is required on merchant side. However, if you persist MSISDN information on your side, this notification may be useful.

Please note that most operators will not disclose this information.

The response object has the following properties:

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "USERID_CHANGE"
status	String	Yes	"CHANGED"
oldUserId	UserId	Yes	Old user identifier on the Operator systems. Refer to par. 4.4.4
newUserId	UserId	Yes	New user identifier on the Operator systems. Refer to par. 4.4.4
changeDate	String	Yes	Date when the UserId change took place

4.5.4 UserId deactivation notifications

This notification is sent when a user decides to close his contract with the Operator. DOCOMODigital platform will automatically unsubscribe all active subscriptions subscriptions and expire persistent tokens, so normally no action is reuired on merchant side. However, if you persist MSISDN information on your side, this notification may be useful.

Please note that most operators will not disclose this information.

The response object has the following properties:

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "USERID_DEACTIVATION"
status	String	Yes	"DEACTIVATED"
userId	UserId	Yes	User identifier on the Telco systems. Refer to par. 4.4.4
deactivationDate	String	Yes	Date when the UserId change took place

5   Recurrent payments (subscriptions)

NOTE: This paragraph is relevant only for Merchants that would like to sell subscription-based service (recurrent payments). If you are not interested in it, you can skip this section.

Subscriptions are recurrent payments. The user follows a subscription process to activate the payment; later on, a fixed amount of money will be charged with a pre-defined frequency (every 1, 3, 7, 30, 90 or 365 days). If the first billing or one of the following renewals fails, a retry of the billing will be triggered in the following days, according to operators' policies. Alternatively, you may configure the subscription in a way that users will not be subscribed if the first billing fails.

A user may decide in any moment to cancel his subscription: from that moment onward he may not be charged (unless he decides to subscribe again). Some operators will automatically unsubscribe users if the recurrent payments fail for a prolonged period of time.

If a user has been correctly charged for a period, you must provide the subscriber the service he has paid for until that period expires. If the user cancels the subscription in the middle of a period for which he has already paid, you must not only guaranteed the access to the service, but also prevent the user to re-activate a subscription before the paid-for period ends.

You can define promotions on subscriptions. You can charge a different price in given intervals of time or in given subscription periods. Subscriptions are not supported by all operators.

Before using these flows you must setup a subscription service providing all the necessary information about the frequency of the payment and the amount to be charged at each renewal. Once the subscription service is configured, we'll communicate to you a unique "product name" that must be used in this API.

Under a special agreement, DOCOMODigital and operators may allow you to declare the product name, price and frequency dynamically at subscription time, skipping the provisioning phase ("delegated subscriptions").

If a user has been subscribed, DOCOMO Digital platform will automatically execute the periodic payments according to the guidelines set by each Mobile Network Operator. Asynchronous payment notifications will be sent back to a notification callback of your choice.

For some operators, it is available a split billing logic. It means that the price of the subscription period will be fragmented in multiple chunks of smaller price. This allows some increase in the revenues when dealing with pre-paid customers with low credit.

If you're using delegated subscriptions, you will be in charge of renewing them, through the renew flow.

Management of recurrent payments is slightly more complex than one-off payments. It involves integrating in your site the following elements:

1. **Subscribe button**: this is a simple HTML form with an action URL on pay.cashlog.com. Submitting it, the user will start the subscription process.

2. **Unsubscribe button**: this is another HTML from posting to pay.cashlog.com. It will start the unsubscription process.

3. **User identification button (optional)**: if a user has an active subscription, he will be entitled to access a service on your site. Therefore you should implement a mechanism to identify subscribed users. A user identification button can help in this respect, but alternative solutions exist.

4. **Subscribe from token button (optional)**: if you executed an identification flow, and the user has no active subscription, you will be granted a one-time token that you can

use to complete a subscription process without repeating the steps already done during the identification flow.

5. **Callback page(s)**: after the user completes a subscription, identification or unsubscription on pay.cashlog.com, we will return him to a page on your site. The POST parameters passed to this page contain the result of the process. You can decide whether to implement separate callback pages or one for all processes.

6. **Notification listener**: whenever a relevant action is completed, an asynchronous, server to server call will be sent to your site. The URL is the one defined in the site configuration (see section 3.3). The POST parameters passed to this page contain the details of the action. We support asynchronous notification for subscription, unsubscription, rebilling and refund events.

5.1 Subscribe button

This button allows the user to activate a subscription. This is an example of subscribe button:

```
<form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=subscribe">
 <input type="hidden" name="countryCode"  value="ZA">
 <input type="hidden" name="siteCode"     value="ST_ZA_0001">
 <input type="hidden" name="productName"  value="MyProductName">
 <input type="hidden" name="price"        value="6.00">
 <input type="hidden" name="currencyCode" value="ZAR">
 <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"   value="Subscribe">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Description
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=subscribe 2. https://pay.cashlog.com/dynamicpe/flow?flow=subscribe HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition. HTTPS is recommended to minimize the risk of frauds to the customer.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country. For example, if you want to charge the user with a Russian operator, you should set the code to "RU"
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes	Product name. Normally, it must match (case sensitively) the value provisioned in advance on DOCOMO Digital platform. In case of delegated subscriptions, it can be a dynamic value. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice.
price	Yes	Product price (per period). Use a '.' as the decimal separator (e.g. 2.00). Up to two decimal places are supported. Some operators only support a limited set of prices. See section YYYY for more information.
currencyCode	Yes	Three letters currency code for this price. (e.g. EUR) http://www.currency-iso.org/dam/downloads/lists/list_one.xls
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button. The value can be any string (e.g. purchase)
subEndDate	No	The user will be automatically unsubscribed on this date. Format is 'YYYY-MM-DD'.If this parameter is not passed, the subscription will last until the user or the operator decide to unsubscribe. If you pass a value, the subscription will be automatically terminated on this date at 23:59:59.
subFrequency	No	For delegated subscriptions, it's the subscription renewal frequency. It is a string and can be: • D: renewed every day • T: renewed every 3 days

		• W: renewed every 7 days • M: renewed every 30 days • Q: renewed every 90 days • Y: renewed every 365 days
promoId	No	Comma-separated list of promotion identifiers that could be applied to the purchase. Promotions are described in section 5.8
requestId	No	A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform and DOCOMO Digital. Maximum length is 250 characters.
notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMODigital platform.
minimizeRedirections	No	This may have two possible values: • "false" • "true" The default is "false". The purchase flows on pay.cashlog.com perform some internal redirections to ensure a smooth user experience even if the user clicks the "Back", "Forward" and "Refresh" browser buttons in the middle of a purchase. They also guarantee clean URLs and cross-tab safety (i.e., you can have multiple independent flows running in different tabs of the same browser). If minimizeRedirections is set to true, most of these internal redirections will be skipped. As a consequence, "Back", "Forward" and "Refresh" will still work, but the user browser may prompt for confirmation questions like "Are you sure you want to resubmit this form?"; cross tab safety is not always guaranteed. The recommendation is to set this parameter to true if you are mainly acquiring via mobile 3G network, because it will make the user experience much faster. On a wifi or web conncection it's safer to keep the parameter to false.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.
paymentMethod	No	If null, it's assumed to be telephone carrier billing. Possible values are: • DCB: carrier billing • CreditCard: Credit Card payment

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5.2 Unsubscribe button

This button allows the user to cancel his subscription.
The typical unsubscription button takes this form:

```
<form method="POST"
    action="http://pay.cashlog.com/dynamicpe/flow?flow=unsubscribe">
 <input type="hidden" name="countryCode"    value="ZA">
 <input type="hidden" name="siteCode"       value="ST_ZA_0001">
 <input type="hidden" name="productName"    value="MyProductName">
 <input type="hidden" name="callbackUrl"    value="http://mysite.com/callback/">
 <input type="hidden" name="subscriptionCode" value="29c07f609f304295bf60d6a760">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Documentation
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=unsubscribe 2. https://pay.cashlog.com/dynamicpe/flow?flow=unsubscribe HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition. HTTPS is recommended to minimize the risk of frauds to the customer.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country.
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes	Product name. Normally, it must match (case sensitively) the value provisioned in advance on DOCOMO Digital platform. In case of delegated subscriptions, it can be a dynamic value. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice.
subscriptionCode	Yes	Subscription code, as returned by the subscribe flow.
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button. The value can be any string (e.g. purchase)
requestId	No	A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform and DOCOMODigital. Maximum length is 250 characters.
notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMODigital platform.
minimizeRedirections	No	This may have two possible values: • "false" • "true" The default is "false". The purchase flows on pay.cashlog.com perform some internal redirections to ensure a smooth user experience even if the user clicks the "Back", "Forward" and "Refresh" browser buttons in the middle of a purchase. They also guarantee clean URLs and cross-tab safety (i.e., you can have multiple independent flows running in different tabs of the same

		browser). If minimizeRedirections is set to true, most of these internal redirections will be skipped. As a consequence, "Back", "Forward" and "Refresh" will still work, but the user browser may prompt for confirmation questions like "Are you sure you want to resubmit this form?"; cross tab safety is not always guaranteed. The recommendation is to set this parameter to true if you are mainly acquiring via mobile 3G network, because it will make the user experience much faster. On a wifi or web connection it's safer to keep the parameter to false.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.

5.3 Get subscriptions button

This button allows to retrieve the status of a subscription. If no subscription was found, it will generate a ticket that can be used to follow a subscription process without re-entering the information provided in the identification flow.
Please notice that this flow has some limitations:

1. If mobile number recognition is not available from the operator, but at the same time it's not necessary for completing a purchase, the flow will return a "not identified" status but still generate a token.
2. If the user is connected via web or WIFI, the user will be asked to enter his MSISDN.

For these reasons you should evaluate a backup mechanism for identifying your users: a cookie for example or saving the MSISDN and subscription code in the user's profile on your side.

```
<form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=get-all">
 <input type="hidden" name="countryCode"  value="ZA">
 <input type="hidden" name="siteCode"     value="ST_ZA_0001">
 <input type="hidden" name="productName"  value="MyProductName">
 <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"   value="Identify">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Documentation
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=get-all 2. https://pay.cashlog.com/dynamicpe/flow?flow=get-all HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition.

		HTTPS is recommended to minimize the risk of frauds to the customer.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country.
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes	Product name. Normally, it must match (case sensitively) the value provisioned in advance on DOCOMODigital platform. In case of delegated subscriptions, it can be a dynamic value. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice.
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button. The value can be any string (e.g. purchase)
requestId	No	A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform and DOCOMODigital. Maximum length is 250 characters.
notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMODigital platform.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.
paymentMethod	No	If null, it's assumed to be telephone carrier billing. Possible values are: • DCB: carrier billing • CreditCard: Credit Card payment

5.4 Subscribe from token button

If a user identification flow returns an "authToken" parameter, you can use it to start a subscription flow without repeating the steps already performed in the identification flow.
Here is an example of a subscribe from token button:

```
<form method="POST"
    action="http://pay.cashlog.com/dynamicpe/flow?flow=subscribe-from-token">
 <input type="hidden" name="authToken"    value="a5d1-4fb0-91c5-4f7482028c38">
 <input type="hidden" name="countryCode"  value="ZA">
 <input type="hidden" name="siteCode"     value="ST_ZA_0001">
 <input type="hidden" name="productName"  value="MyProductName">
 <input type="hidden" name="price"        value="6.00">
 <input type="hidden" name="currencyCode" value="ZAR">
 <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"   value="Subscribe">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Documentation
Form method	Yes	Must be "POST". The platform will not accept forms submitted

			with GET method.

Form action	Yes		There are two options:
			   3. http://pay.cashlog.com/dynamicpe/flow?flow=subscribe
			   4. https://pay.cashlog.com/dynamicpe/flow?flow=subscribe
			HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition.
			HTTPS is recommended to minimize the risk of frauds to the customer.

authToken	Yes		Authorization token obtained from a previous identify flow. If a site is configured to sell both single purchase and subscription products, you may also pass the token generated by a getAll flow. Normally, a token can be used for just one subscribeFromToken request. Under specific agreements DOCOMO Digital and Operators may allow the reuse of the token for multiple purchases ("persistent tokens"). Persistent tokens can be subject to expiration after an amount of time that depends on the operator.
countryCode	Yes		Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country
siteCode	Yes		Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
productName	Yes		Product name. Normally, it must match (case sensitively) the value provisioned in advance on DOCOMODigital platform. In case of delegated subscriptions, it can be a dynamic value. Depending on the operator capabilities, this string may be shown during the purchase flow or in the user's invoice.
price	Yes		Product price (per period). Use a '.' as the decimal separator (e.g. 2.00). Up to two decimal places are supported.
currencyCode	Yes		Three letters currency code for this price. (e.g. EUR) http://www.currency-iso.org/dam/downloads/lists/list_one.xls
callbackUrl	Yes		URL of the callback page on your site.
mpaySubmit	Yes		Please use this as the name of the submit button. The value can be any string (e.g. purchase)
subEndDate	No		The user will be automatically unsubscribed on this date. Format is 'YYYY-MM-DD'. If this parameter is not passed, the subscription will last until the user or the operator decide to unsubscribe. If you pass a value, the subscription will be automatically terminated on this date at 23:59:59.

subFrequency	No		For delegated subscriptions, it's the subscription renewal frequency. It is a string and can be:
			  • D: renewed every day
			  • T: renewed every 3 days
			  • W: renewed every 7 days
			  • M: renewed every 30 days
			  • Q: renewed every 90 days
			  • Y: renewed every 365 days

promoId	No		Comma-separated list of promotion identifiers that could be applied to the purchase. Promotions are described in section 5.8
requestId	No		A unique identifier of the purchase transaction generated by the merchant. It's returned in the final response, and can be used as a cross reference between the merchant's platform

		and DOCOMO Digital. Maximum length is 250 characters.
Notes	No	Optional pass-through parameter that is echoed back in the final response. It's persisted on DOCOMO Digital platform.
minimizeRedirections	No	This may have two possible values: • "false" • "true" The default is "false". The purchase flows on pay.cashlog.com perform some internal redirections to ensure a smooth user experience even if the user clicks the "Back", "Forward" and "Refresh" browser buttons in the middle of a purchase. They also guarantee clean URLs and cross-tab safety (i.e., you can have multiple independent flows running in different tabs of the same browser). If minimizeRedirections is set to true, most of these internal redirections will be skipped. As a consequence, "Back", "Forward" and "Refresh" will still work, but the user browser may prompt for confirmation questions like "Are you sure you want to resubmit this form?"; cross tab safety is not always guaranteed. The recommendation is to set this parameter to true if you are mainly acquiring via mobile 3G network, because it will make the user experience much faster. On a wifi or web connection it's safer to keep the parameter to false.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects only the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.
messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.

5.5 Renew API

If you're using delegated subscriptions, then you will be in charge of renewing subscriptions periodically, and according to local regulations. Please refer to the subscription/renew API on the Advanced documentation.

5.6 Callback page

After the user completes a "subscribe", "unsubscribe", "identification" or "subscribe from token" flow on pay.cashlog.com, it will return to the callback page defined in the "callbackUrl" parameter of the respective button.
Requests to this page are sent with POST method and with "application/x-www-form-urlencoded" media type.
The POST parameters received are exactly the same of a non-recurrent payment, as described in section 4.4.1 . The digital signature algorithm is also the same described in section 4.4.2 .

Having verified the signature, you should extract and the value of the "response" POST parameter. This is a JSON-encoded object containing a "responseType" property. The responseType would be:

- SUBSCRIBE: for "subscribe" and "subscribe from token" buttons

- UNSUBSCRIBE: for "unsubscribe" buttons

- GET_ALL: for "identification" buttons

In the following sections you will find the format of the JSON objects in these three cases.

5.6.1 Subscribe response

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "SUBSCRIBE"
subscriptionStatus	String	Yes	"SUBSCRIBED", "PENDING_NOTIFICATION" or "NOT_SUBSCRIBED" – SUBSCRIBED: the subscription has been activated. – PENDING_NOTIFICATION: the status of the user is still unknown. It will be notified later with a server to server notification. – NOT_SUBSCRIBED: the user was not subscribed
billingStatus	String	Yes	"BILLED", "PARTIALLY_BILLED", "PENDING_NOTIFICATION" or "NOT_BILLED" – BILLED: the user was charged the price of the subscription product, or the promotional price. The amount charged is returned in the "amountCharged" parameter. – PARTIALLY_BILLED: the user was charged only a fraction of the price of the subscription product (or promotional price). This may happen if the product is configured for split billing. The amount charged is returned in the "amountCharged" parameter. – PENDING_NOTIFICATION: the status of the payment is still unknown. It will be notified later with a server to server notification. – NOT_BILLED: the payment of this subscription failed.
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action. It's present if subscriptionStatus is NOT_SUBSCRIBED.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action. It's present if subscriptionStatus is NOT_SUBSCRIBED.
errorDescription	String	No	Human readable description of the error occurred. It's present if subscriptionStatus is NOT_SUBSCRIBED.
subscriptionCode	String	No	Unique identifier of the subscription. It's present if subscriptionStatus is SUBSCRIBED

transactionCode	String	Yes	Unique identifier of the transaction. May not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
requestId	String	No	A unique identifier of the purchase transaction generated by the merchant. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
notes	String	No	Optional pass-through parameter. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
purchaseCode	String	No	A five-digits receipt number of the purchase. It's present only if the subscriptionStatus is SUBSCRIBED.
amountCharged	String	No	It is the actual amount billed to the final user and may differ from the price passed in input. It's not present in case of billing failure.
promoId	String	No	Identifier of the promotion applied to the subscription.
userId	UserId	No	The object represents the User identifier on the Telco systems.
telco	Telco	No	The object represents the operator used during the flow.
infoToDisplay	Map	No	Additional information on the purchase. Can be safely ignored.

The Telco object has the following properties:

Property	Type	Mandatory	Description
code	String	Yes	Unique identifier of the Operator. Refer to the "ONE API coverage" document for the full list.
name	String	Yes	Human readable Operator name. Refer to the "ONE API coverage" document for the full list.

The userId object has the following properties:

Property	Type	Mandatory	Description
msisdn	String	No	MSISDN in international format.
maskedMsisdn	String	No	MSISDN in international format, with some digits masked for privacy reasons.
alias	String	No	A telco-assigned alias that identifies the user during the purchase transaction.
userProfile	String	No	Billing profile of the user. Most operators do not disclose this information. Can be: – "prepaid" – "postpaid" – "corporative"
customerId	String	No	Unique, anonymous identifier of the end-user. Most operators do not disclose this information.

5.6.2 Unsubscribe response

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "UNSUBSCRIBE"
status	String	Yes	"UNSUBSCRIBED", "PENDING_UNSUBSCRIPTION" or "ERROR" – UNSUBSCRIBED: the subscription has been deactivated, no further payments will occur for this subscription. You can stop providing the service to this user. The user is free to subscribe to the same product in any moment. – PENDING_UNSUBSCRIPTION: user has paid for the current period and should be given access to the service. However, the subscription may no longer be renewed and will terminate at the end of the current period. – ERROR: an error occurred and the user may still be subscribed. You can call the getAll API to verify the actual status of the user, and repaet the unsubscription call if needed.
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action. It's present if status is ERROR.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action. It's present if status is ERROR.
errorDescription	String	No	Human readable description of the error occurred. It's present if status is ERROR.
subscriptionCode	String	No	Unique identifier of the subscription. It's present if status is not ERROR
transactionCode	String	Yes	Unique identifier of the transaction. May not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
requestId	String	No	A unique identifier of the purchase transaction generated by the merchant. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
notes	String	No	Optional pass-through parameter. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
infoToDisplay	Map	No	Additional information on the purchase. Can be safely ignored.

5.6.3 Get subscriptions response

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "GET_ALL"
status	String	Yes	"IDENTIFIED", "NOT_IDENTIFIED" or "ERROR"
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action. It's present if status is ERROR.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action. It's present if status is ERROR.
errorDescription	String	No	Human readable description of the error occurred. It's present if status is ERROR.
subscriptions	Array of Subscription	No	List of active subscriptions for the identified user and for the product passed in input. Most operators do not allow multiple subscriptions for the same user and product, so most of the times the number of elements in this array is 0 or 1. This parameter is returned only if status is IDENTIFIED.
transactionCode	String	Yes	Unique identifier of the transaction. May not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
requestId	String	No	A unique identifier of the purchase transaction generated by the merchant. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
authToken	String	No	Optional pass-through parameter. It's present only if you pass it in the purchase request. Even if passed, may not be present in case of request validation errors (e.g. incorrect media type, syntactically invalid request...)
userId	UserId	No	Authorization token. This can be used as an input for subscribeFromToken button. If the site is configured to sell both single purchase and subscription products, you may use this token also for purchaseFromToken button. Normally, a token can be used for just one purchaseFromToken or subscribeFromToken flow. Under specific agreements DOCOMODigital and operators may allow the reuse of the token for multiple purchases ("persistent tokens"). Persistent tokens can be subject to expiration after an amount of time that depends on the operator.
telco	Telco	No	User identity. It's present only if the status is "IDENTIFIED".
infoToDisplay	Map	No	Additional information on the purchase. Can be safely ignored.

The subscription object is a map of the following values:

Property	Type	Mandatory	Description
subscriptionCode	String	Yes	Alfanumeric number identify the single subscription (eg. 68#2-173709477)
userId	UserId	Yes	The object represents the User identifier on the Operator systems.
Telco	Telco	Yes	The object represents the Operator used during the flow.
subEndDate	String	Yes	Specify when a subscription should be automatically stopped. If it is null the subscription will not be stopped until an explicit request is made.
promoId	String	No	Unique identifier of the promotion applied to the subscription.
lastBilledDate	String	No	Is the date of the last billed event
dateActivated	String	Yes	Is the date in which the subscription has been activated
status	String	Yes	May be one of the following: – ACTIVE: the subscription can be renewed at the end of the current period – DELETE_PENDING: user has paid for the current period and should be given access to the service. However, the subscription may no longer be renewed and will terminate at the end of the current period. – PENDING_NOTIFICATION: the usbscription activation request has been submitted to DOCOMODigital, but the user is not yet subscribed. It should not be charged.

The Telco object has the following properties:

Property	Type	Mandatory	Description
code	String	Yes	Unique identifier of the Operator. Refer to the "ONE API coverage" document for the full list.
name	String	Yes	Human readable Operator name. Refer to the "ONE API coverage" document for the full list.

The userId object has the following properties:

Property	Type	Mandatory	Description
msisdn	String	No	MSISDN in international format.
maskedMsisdn	String	No	MSISDN in international format, with some digits masked for privacy reasons.
alias	String	No	A telco-assigned alias that identifies the user during the purchase transaction.
userProfile	String	No	Billing profile of the user. Most Operators do not disclose this information. Can be: – "prepaid" – "postpaid" – "corporative"
customerId	String	No	Unique, anonymous identifier of the end-user. Most Operators do not disclose this information.

5.7 Notification listener

The notification listener page is a page on your server that will receive data in the same format of the callback page (see section 5.6): data is sent in a POST request with MIME type application/x-www-form-urlencoded, and you will receive the same POST parameters that are present in the callback page.

Upon receiving a notification, you should validate the digital signature to make sure that the notification is authentic: the algorithm is the same explained in section 4.4.2 .

Then you should unserialize the JSON data contained in the "response" POST parameter. You will always find a property named "responseType". Depending on the value of this property you can understand which type of notification you can understand which type of notification you're receiving and how to parse the rest of the JSON object.

If you integrated recurrent payments you will receive one of the following values for "responseType":

- SUBSCRIBE: notification of a "subscribe" or "subscribe from token" flow

- UNSUBSCRIBE: notification of an "unsubscribe" flow

- PURCHASE_RETRY: notification of a charge made by DOCOMO Digital platform to retry a failed first billing of a subscription.

- RENEWAL: notification of a charge made by DOCOMO Digital platform to renew a subscription

- RENEWAL_RETRY: notification of a charge made by DOCOMO Digital platform to retry a failed renew

- REFUND: notification of the refund of a transaction related to the subscription

The format of the JSON object in these cases is described in the following sections.

After processing the notification you should return us a response with an HTTP 200 status. The content of the response will be ignored by the DOCOMO Digital server. If we do not receive any response from the notification listener, or if the response has an HTTP status different from 200, we will retry to send the notification. We will do a retry every 10 minutes for the first hour, and one every hour in the following 23 hours. The retry expires 24 hours after the first notification attempt.

5.7.1 Subscribe notification

The JSON object has exactly the same format of the subscribe response. See paragraph 5.6.1

5.7.2 Unsubscribe notification

The JSON object has exactly the same format of the unsubscribe response. See paragraph 5.6.2

5.7.3 Purchase retry notification

The JSON object has exactly the same format of the subscribe response (see section 5.6.1). The only difference is the "responseType" parameter, which has a value "PURCHASE_RETRY".

5.7.4 Renewal notification

The JSON object has exactly the same format of the subscribe response (see section 5.6.1). The only difference is the "responseType" parameter, which has a value "RENEWAL".

5.7.5 Renewal retry notification

The JSON object has exactly the same format of the subscribe response (see section 5.6.1). The only difference is the "responseType" parameter, which has a value "RENEWAL_RETRY".

5.7.6 Refund notification

The JSON object has the same format of the refund of a non-recurrent payment (see section 4.5.2).

5.7.7 UserId change notifications

Please refer to section 4.5.3

5.7.8 UserId deactivation notification

Please refer to section 4.5.4

5.8 Promotions

You can define promotional prices for a subscription product on a given set of Mobile Network Operators. There are two types of promotions:
1. Period based: you define the price that will apply to every subscription and renewal falling between two dates. For example: "For Vodafone users: 1€ instead of 2€ for all transactions between January 15th and February 15th".

2. Iteration based: you define the price based on the renewal number. For example "For TIM and Wind users: free for the first 2 weeks of subscription".

You may define complex promotions combining discounted prices for various periods or iterations, For example: "Vodafone users: free for the first two weeks, then 1€ for the following 2 weeks".
Some operators let you limit the scope of a promotion only to a specific type of user profile (pre-paid, post-paid, business).
Promotions have a limited lifetime, after which they expire and can no longer be applied to new subscriptions. They will of course still apply to the users that were subscribed during the time of validity.
Promotions may or may not be applied twice to the same user, depending on the configuration.
Suppose for example that a promo is valid between January 1st and January 15th, and involves 1 month free for Vodafone users. If a user subscribes on January 15th, his subscription will be free of charge until February 14th. However, if a user subscribes on January 16th, this promo will not be applied.
To configure a promotion you need to contact DOCOMO Digital team, who will take care of the operator's approval and configure it on the platform. Each promotion will be given an identification number that can be passed in the promoId field of the "subscribe" and "subscribe from token" buttons.
You may also pass a list of promoID in the same button, for example, if you have the following promotions:
- 11201: Vodafone: Free for the first 3 weeks
- 11203: TIM: Free for the first 2 weeks

and you pass "11201,11203" in the purchase button, the promo 11201 is applied if the user is a Vodafone one, 11203 if the user is a TIM one, and no promotion for all other operators.
DOCOMO Digital platform performs a validation of the promotions that are passed in the button, and can throw blocking or non-blocking errors.
- Blocking errors (the subscription flow will fail):
  - Configuration error: one or more promoId in the list are not configured

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- o Overlapping: you are passing two promotions that apply to the same class of users
- Non-blocking errors (the subscription flow will move on, but the promo will not be applied):
  - o Promo out of validity period: you passed a promotion that is not yet valid or has already expired
  - o Promo already applied: the user has already purchased the same product under promotion, and the promotion is marked as non-repeatable

Below the list of error codes related to promotion:

ERR_0158	Invalid Promo, One or all promo is not related to the product or is not even present in the DB. This error blocks the purchase at any time. It's a fatal error
ERR_0159	Expired Promo, the promo cannot be applied because the **date_stop** in the **subscription_service_promo** table is less than the date the user is subscribing. It's a warning error
ERR_0160	Promo already used for the number doing the purchase, the purchase can go on but the full price will be applied, and the user is notified in the page of the purchase. It's a warning error
ERR_0161	Promotion overlapping means that in the list of promotions that the merchant pass, 2 or more are related to the same operator which is not allowed. It's a fatal error
ERR_0162	Invalid Profile. The promo can't be applied because the user profile is not the one associated to the promo. It's a warning error and it can be returned only if the billing profile of the user is returned by the Operator.

Refer to the "ONE API coverage" document for the full list of Operators that support promotions.

5.9 Split billing

You can ask DOCOMO Digital team to configure a subscription service for split billing. When this configuration is active, the price of some or all billing events of the subscription will be fragmented into smaller amounts. This has a positive effect on the ARPU, since it allows recovering some money even from users with low credit. Within the constraints imposed by the operators, it's possible to configure the split billing:

- for the first billing transactions

- for the retry of the first billing transactions (this is mandatory if the first billing purchase is split)

- for renewal transactions

- for renewal retry transactions (this is mandatory if the renewal is split)

The mechanism is totally transparent for you: DOCOMO Digital platform will take care of the fragmentation logic. When split billing is applied and the full price could not be totally billed, you will received PURCHASE, PURCHASE_RETRY, RENEWAL or RENEWAL notifications with a "billingStatus" "PARTIALLY_BILLED". If during a later transaction the full price is charged, you will receive a further notification with billingStatus "BILLED".
If the Merchant tries to refund a split transaction, the refund of some individual split may fail. Therefore the "price" parameter may contain an amount smaller than the value of the refunded transaction. In this case, you can call the refund API later on to try to refund the missing amount.
Refer to the "ONE API coverage" document for the full list of operators that support split billing.

6 Refund

If you want to integrate this functionality into your site, you can use a refund button and a refund callback page. You can refund a user even in your Merchant private area through a button in the transactions or subscriptions interfaces. The API allows refunding one single transaction at time, so in case of multiple transactions (for example related to a subscription) is in charge to the merchant to invoke this API (with different inputs) multiple times. At the end of a successful refund request the Merchant will receive a refund Notification as described in chapter 4.5.2 and 5.7.6

Refer to the "ONE API coverage" document for the full list of Operators that support Refund.

6.1 Refund button

Here is an example of a refund button:

```
<form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=refund">
 <input type="hidden" name="countryCode"    value="PT">
 <input type="hidden" name="siteCode"       value="ST_PT_0001">
 <input type="hidden" name="transactionCode" value="a5d1-4fb0-91c5-4f7482028c38">
 <input type="hidden" name="callbackUrl"    value="http://mysite.com/callback/">
 <input type="submit" name="mpaySubmit"     value="Refund">
</form>
```

Here follows the complete documentation of all form parameters:

Name	Mandatory	Documentation
Form method	Yes	Must be "POST". The platform will not accept forms submitted with GET method.
Form action	Yes	There are two options: 1. http://pay.cashlog.com/dynamicpe/flow?flow=refund 2. https://pay.cashlog.com/dynamicpe/flow?flow=refund HTTP is recommended if you want to optimize speed and, for some operators, it's necessary to obtain automatic mobile number recognition. HTTPS is recommended to minimize the risk of frauds to the customer.
countryCode	Yes	Country code, as per ISO 3166-1 Alpha-2 standard. This is the country code of the billing country.
siteCode	Yes	Unique identification code of the site, as displayed in the private area on cashlog.com portal (see section 3.3)
transactionCode	Yes	Code of the transaction to refund.
callbackUrl	Yes	URL of the callback page on your site.
mpaySubmit	Yes	Please use this as the name of the submit button.
requestId	No	You may pass a unique identifier generated on your side. It may help you in correlating the purchase button with the callback. We will save this value in our database.
notes	Yes	This is a free form notes field, with maximum length of 255 bytes. We will save it in our database.
customParams	No	A JSON string containing parameters to fine-tune the integration with a specific operator.
styleName	No	This parameter will apply to the purchase experience a custom look and feel. Styles can be configured from the Merchant portal.
language	No	Must be a language tag as defined by https://tools.ietf.org/html/bcp47. At the moment this parameter affects the language of the PIN SMS message. This feature is not supported by all carriers. If this parameter is not passed, we're going to send the message in the default language for the country.

messageParams	No	An object containing the value of placeholders defined in the PIN message. This feature is not supported by all carriers.

6.2 Callback page

After the user completes a "refund" flow on pay.cashlog.com, it will return to the callback page defined in the "callbackUrl" parameter of the refund button.

Requests to this page are sent with POST method and with "application/x-www-form-urlencoded" media type.

The POST parameters received are exactly the same described in section 4.4.1 . The digital signature algorithm is also the same described in section 4.4.2 .

Having verified the signature, you should extract and the value of the "response" POST parameter. This is a JSON-encoded object containing a "responseType" property. The responseType would be in this case "REFUND".

The format of the JSON object is exactly the same received in refund notifications (see paragraph 4.5.2).

7 Secure button

In chapters 4 to 6 we described how to integrate your website with OneAPI by including in your pages HTML forms containing the flow input parameters.
This approach, while simple, has a potential security weakness: in facts the end-user may download the page from your website, make changes to the flow parameters and submit them.
Secure buttons allow you to generate a form whose parameters cannot be altered by the end-user. It applies to all flows managed by the platform: purchase, identify, purchase from token, subscribe, get all, subscribe from token, unsubscribe and refund.

To generate a secure button you have to make a server to server API call to OneAPI, passing all the parameters that you would include in a button. The API returns a unique, non-reusable action URL. At this point you can create an HTML form that does not include the usual parameters, but just this action URL. When the user submits this form, OneAPI will start the flow with the parameters passed in the API.
The action URL will have a validity window of 10 minutes.

To use this feature you need to contact DOCOMO Digital merchant support team and provide the IP address of the servers that are going to call the API, so we can properly add them to our ACL.

Interface
- Endpoint:
  https://pay.cashlog.com/dynamicpe/securebutton/generate?flow={flow}&protocol={proto}
- Method: POST
- Request Content-Type: application/x-www-form-urlencoded
- Response Content-Type: application/json
- Recommended timeout: 2s

Request query string parameters

Name	Mandatory	Documentation
flow	Yes	Defines the flow for which you want to create a button. Must be one of the following: • purchase • identify • purchaseFromToken • subscribe • getAll • subscribeFromToken • unsubscribe • refund
protocol	No	Defines the protocol of the action url of the secure button. Must be one of the following: • http • https This parameter is optional, the default is http.

Request body parameters

The body of the API request must contain all the parameters that you would include in the non-secure buttons.
The parameter name and value must be URL-encoded and separated by the '=' character. The name/value pairs must be separated by the '&' character. So the format would be:

urlencodedParamName1=urlencodedParamValue1&urlencodedParamName2=urlencodedParamValue2...

Response parameters
The API returns a JSON object with the following parameter:

Name	Mandatory	Documentation
formActionUrl	Yes	Unique, non-reusable action url of the secure button

Secure button generation
Having obtained tthe formActionUrl from the securebutton/generate API, you can generate a web form that starts the flow in this way:

```
<form id="mpayButton" method="POST" action="formActionUrl">
   <input type="submit" value="Go" class="submitButton">
</form>
```

Example
Suppose that you need to transform this non-secure button into a secure button:

```
<form id="mpayButton" method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=purchase">
 <input type="hidden" name="countryCode" value="JP">
 <input type="hidden" name="siteCode" value="ST_EXAMPLE_01">
 <input type="hidden" name="productName" value="Example Product">
 <input type="hidden" name="price" value="1.00">
 <input type="hidden" name="currencyCode" value="JPY">
 <input type="hidden" name="callbackUrl" value="https://example-site.com/callbacks/">
 <input type="hidden" name="requestId" value="363fc49f-248f-3628-31b9-293186a5a20e">
 <input type="submit" value="Go" class="submitButton">
</form>
```

The first step is that your server performs a POST request to the securebutton/generate API (note that there should be no newline in the request body, here it's wrapped fore readability).

```
POST /dynamicpe/securebutton/generate?flow=purchase&protocol=http
Host: pay.cashlog.com
Content-Type: application/x-www-form-urlencoded
Accept: application/json

countryCode=JP&siteCode=ST_EXAMPLE_01&productName=Example%20Product&price=1.00&currencyCode=JPY&callbackUrl=https%3A%2F%2Fexample-site.com%2Fcallbacks%2F&requestId=363fc49f-248f-3628-31b9-293186a5a20e
```

The API will return a JSON string:

```
{"formActionUrl":"https://pay.cashlog.com/dynamicpe/button=979ab62e-248f-3628-31b9-3486cdab67a1"}
```

At this point you can serve this form to the client:

```
<form id="mpayButton" method="POST" action="https://pay.cashlog.com/dynamicpe/button=979ab62e-248f-3628-31b9-3486cdab67a1">
   <input type="submit" value="Go" class="submitButton">
</form>
```

As you can see, this form does not contain any parameter that can be manipulated by the client. Note that this form is one-time, as soon as the user clicks on it, it cannot be reused to start another flow.

8   Report API

The report API offers the capability of downloading transactions reports generated by DOCOMO Digital Platform. The API is exposed as Rest WebService using https protocol and Basic Authentication. Credentials to access the reporting API are the same used to login in the cashlog.com web Portal.

Reports are available one day later the day of the transaction. All reports are in CSV format.

Interface:
- *Endpoint:*
  https://api.cashlog.com/report/cashlog/[MerchantCode]/[DATE_REPORTCODE].csv
- Recommended timeout: 20s

The URL needs to be formatted using the following rules:
- The [MerchantCode] section of the URL must contain the code assigned during the registration on Cashlog Portal. You can find your MerchantCode in the "My Account" page.

- The [DATE_REPORTCODE] section of the URL hold two different values:

  - DATE: the last day of the transactions included in the report. The Date pattern is: YYYYMMDD.

REPORTCODE: refers to the kind of report the Merchant wants to download.

Note. The date and the report code are separated by a "_" in the URL.

Examples:
URL

```
https://api.cashlog.com/report/cashlog/MyCode231/20120706_R011.csv
```

How to invoke the API , with basic authentication:

```
StringBuilder restURL = new StringBuilder();
HttpWebRequest restRequest;
HttpWebResponse restResponse;

// build the URL String

restRequest = (HttpWebRequest)
WebRequest.Create(https://api.cashlog.com/report/cashlog/MyCode231/20120706_R011.csv);

//configure the basic authentication

restRequest.Headers.Add("Authorization", "Basic " +
Convert.ToBase64String(Encoding.ASCII.GetBytes("email:password")));

// use the GetResponse method to obtain a WebResponse object
// for the request casting to an HttpWebResponse

restResponse = (HttpWebResponse) restRequest.GetResponse();

//use the payload of the response that will contain the .csv file

restResponse.GetResponseStream();
```

The repot API will manage basic http errors, below the list of the error status returned from the API:
- 404 – The report is not present

- 401 – Authentication failed
- 500 – Internal error

8.1 List of reports available

Below the list of the batch Reports available for download:

Report Code	Short Description
R011	Contains the full list of all transactions done from the beginning of the month till the report date. All transactions details are shown.
R014	Contains an aggregate view of the transactions done in the current month
R015	contains an aggregate view of the number of subscribers in/out in the current month

9 Messaging API

9.1 sendSMS

This API method allows Merchants to send additional free SMS to user that have completed a purchase (both on demand and subscription). To use this API, you must obtain an authorization by the DOCOMO Digital business team.
The API will return as soon as the SMS has been taken in charge by the DOCOMO Digital platform.
To prevent abuse, a limit on maximum number of SMS is enforced by the platform. Additionally, SMS containing "bad words" will be rejected. In case of additional SMS related to subscription services:
- the maximum number allowed refers to each billing period
- an error will occur if the user has been already deactivated

Interface
- *Endpoint: http[s]://api.cashlog.com/mpay-ws/v2/country/{countryCode}/site/{siteCode}/transaction/{transactionCode}/sendSMS*
- The countryCode to be specified in the URL must be is a ISO 3166 alpha-2 code. This is a two-letters uppercase code. Available codes can be found here: http://www.iso.org/iso/country_codes/iso_3166_code_lists/country_names_and_code_elements.htm
- The SiteCode to be specified in the URL is the one assigned to the merchant's site at configuration time.
- The "transactionCode" to be specified in the URL is the identifier of the transaction which require the SMS Sending
- Recommended timeout: 30s.

Request parameters

Param Name	Type	Mandatory	Param Description
smsText	String	Yes	SMS Text to be sent

Response parameters for SEND_SMS responseType

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "SEND_SMS"
status	String	Yes	"SENT" or "ERROR"
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action
errorDescription	String	No	Human readable description of the error occurred.

Error codes

mainErrorCode	detailedErrorCode	errorDescription
ERR_0020	ERR_0162	The user has already unsubscribed
ERR_0020	ERR_0163	Maximum number of SMS was exceeded

ERR_0020	ERR_0164	The sendSMS method is disabled for this merchant
ERR_0020	ERR_0165	The SMS text contains bad words

Example Request

Request

{
   "smsText":"Your unlock code is 27547"
}

Example Responses

Success

{
   "final":true,
   "status":"SENT",
   "responseType":"SEND_SMS"
}

SMS limit reached

{
   "responseType":"SEND_SMS",
   "final":true,
   "mainErrorCode":"ERR_0020",
   "status":"ERROR",
   "detailedErrorCode:"ERR_0163",
   "errorDescription":"Maximum number of SMS was exceeded"
}

9.2 sendSMSTrusted

This API method allows Merchants to send additional SMS to the users. Messages are free for the user but will be charged back to you.
In order to use this API, a Merchant need to be authorized by the DOCOMO Digital business team.
The API will return as soon as the SMS has been taken in charge by the DOCOMO Digital platform.
To prevent abuse, SMS containing "bad words" will be rejected.

Interface

- *Endpoint: http[s]://api.cashlog.com/mpay-ws/v2/country/{countryCode}/site/{siteCode}/messaging/sendSMSTrusted*
- The countryCode to be specified in the URL must be is a ISO 3166 alpha-2 code. This is a two-letters uppercase code. Available codes can be found here: http://www.iso.org/iso/country_codes/iso_3166_code_lists/country_names_and_code_elements.htm
- The SiteCode to be specified in the URL is the one assigned to the merchant's site at configuration time.
- The "transactionCode" to be specified in the URL is the identifier of the transaction which require the SMS Sending
- Recommended timeout: 30s.

Request parameters

Param Name	Type	Mandatory	Param Description
telcoCode	String	Yes	User's phone operators. Refer to the "ONE API coverage" doc for a list of supported telco codes.

msisdn	String	Yes	MSISDN of the target user
smsText	String	Yes	SMS Text to be sent

Response parameters for SEND_SMS responseType

Property	Type	Mandatory	Description
responseType	String	Yes	Will be "SEND_SMS"
status	String	Yes	"SENT" or "ERROR"
mainErrorCode	String	No	Identify a group of errors, usually related to a specific action.
detailedErrorCode	String	No	Identify a specific error inside of a group related to a specific action
errorDescription	String	No	Human readable description of the error occurred.

Error codes

mainErrorCode	detailedErrorCode	errorDescription
ERR_0020	ERR_0164	The sendSMSTrusted method is disabled for this merchant
ERR_0020	ERR_0165	The SMS text contains bad words

10   Advanced button options

10.1 IFrame Integration

Opening the purchase flows within an iframe is normally forbidden for security reasons. If you try to do so, it will not work. Some Operators do not support this feature at all.
Refer to the "ONE API coverage" document for the full list of Operators that support this feature.
You may ask DOCOMO Digital Business Team to enable the iframe integration. If given the permission, you should include the following scripts in the page of your site that contains the purchase button:

```
<script type="text/javascript"
     src="https://pay.cashlog.com/dynamicpe/js/jquery-1.6.1.js">
</script>
<script type="text/javascript"
     src="https://pay.cashlog.com/dynamicpe/js/iframesupport.js">
</script>
```

The same resources are available under plain http if needed.
Optionally you can specify the desired behavior when the user is redirected back to your website. To do so, set the following parameter in any of the buttons described in sections 4   6
.

Name	Mandatory	Description
stayInFrame	No	This may have two possible values: • "false" • "true" The default is true If the purchase flow is opened within the iframe of your website, this parameter controls how the callback page is opened. "true" means that the callback page will be opened within the iframe "false" means that the callback will be opened full-screen.

Example:

```
<html>
 <head>
  <script type="text/javascript"
       src="https://pay.cashlog.com/dynamicpe/js/jquery-1.6.1.js">
  </script>
  <script type="text/javascript"
       src="https://pay.cashlog.com/dynamicpe/js/iframesupport.js">
  </script>
 </head>
 <body>
  <form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=purchase">
   <input type="hidden" name="countryCode"  value="ZA">
   <input type="hidden" name="siteCode"     value="ST_ZA_0001">
   <input type="hidden" name="productName"  value="MyProductName">
   <input type="hidden" name="price"        value="6.00">
   <input type="hidden" name="currencyCode" value="ZAR">
   <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
   <input type="hidden" name="stayInFrame"  value="true">
   <input type="submit" name="mpaySubmit"   value="Purchase">
  </form>
 </body>
</html>
```

10.2 BASIC+ Integration

There are cases where you know the user's phone number and Mobile Network Operator even before a flow is started. In this case you can pass this information in any of the buttons described in sections 4   6   . Doing so, DOCOMO Digital platform will not ask the same information a second time to the user.

For example, you may want to use this feature if there is already a MSISDN identification system implemented at your side.

Please note that this feature is disabled by default, and requires an explicit approval from DOCOMO Digital team and from the Mobile Network Operator.

If you are allowed to use the Basic+ integration, then you can pass these two parameters in the buttons. Note that you need to pass both parameters, passing only one of them will result in an error.

Name	Mandatory	Description
msisdn	No	MSISDN of the user in international format.
telcoCode	No	User's phone Operator. Refer to the "ONE API coverage" document for the full list of supported telco codes.

Example:

```
<form method="POST" action="http://pay.cashlog.com/dynamicpe/flow?flow=purchase">
 <input type="hidden" name="countryCode"  value="ZA">
 <input type="hidden" name="siteCode"     value="ST_ZA_0001">
 <input type="hidden" name="productName"  value="MyProductName">
 <input type="hidden" name="price"        value="6.00">
 <input type="hidden" name="currencyCode" value="ZAR">
 <input type="hidden" name="callbackUrl"  value="http://mysite.com/callback/">
 <input type="hidden" name="msisdn"       value="+27123456789">
 <input type="hidden" name="telcoCode"    value="VCOM">
 <input type="submit" name="mpaySubmit"   value="Purchase">
</form>
```

11 Error Codes

- <u>Main Error Code</u>   : Simple, high-level code that identify a specific action to be executed.
- <u>Detail Error Code</u>   : Specific, low-level internal code that identifies an error in details.
- <u>Code Description</u>   : Brief Technical description for the detailed error code returned.
- <u>Possible Actions</u>   : It covers actions for recovery (a new call with the correct input) or the ability to call the next sequence to confirm the purchase and continue the transaction as a result of an affirmative response from the first call.

Status Code	Possible Actions	StatusCodeDetail	StatusCodeDescription	Notified in KO notification callback	Notified in error_callback_url
ERR_0001	CHANGE MSISDN	ERR_0408	Insufficient prepaid balance	YES[1]	NO
ERR_0002	CHANGE MSISDN	ERR_0406	Exceeded daily limit	YES[1]	NO
ERR_0003	CHANGE MSISDN	ERR_0407	Exceeded monthly limit	YES[1]	NO
ERR_0004	CHANGE MSISDN	ERR_0402	Error, User exceeded Purchase cost limits	YES	YES
		ERR_0410	Exceeded transaction limit	YES	NO
		ERR_0411	Exceeded merchant limit	YES	NO
ERR_0005	CHANGE MSISDN	ERR_0200	Customer temporary blacklisted	NO	YES
		ERR_0201	User suspended by cc	NO	NO
ERR_0006	CALL LATER	ERR_9915	Operator Session/Time expired	YES[1]	YES
	CALL LATER	ERR_9920	Temporary Error	YES	YES
ERR_0007	NO ACTION	ERR_9999	Generic failure	YES[1]	YES
		ERR_9998	Customer not subscribe	YES	YES
		ERR_9997	Customer not authorized	YES[1]	YES
		ERR_9996	Wrong customer	YES[1]	YES
		ERR_9995	Too many requests for this user	YES	YES
		ERR_9994	Too many requests global	YES	YES
		ERR_0800	Financial Accounting Issue	YES	YES
		ERR_0900	Caring Message not Sent, connection problem	YES	YES
		ERR_0901	Country Unknown, Caring Message not Sent	YES	YES
		ERR_0902	Operator not Found, Caring Message not Sent	YES	YES
		ERR_0903	Operator not Found, Caring	YES	YES

			Message not Sent		
		ERR_0904	Error during persisting Caring Message	YES	YES
		ERR_0905	Technical Error, Caring Message not Sent	YES	YES
		ERR_0401	Error during Rules Evaluation	YES	YES
		ERR_0403	Error during Merchant Rules Evaluation	YES	YES
		ERR_0500	OTP Message not Sent, connection problem	YES	YES
		ERR_0501	Country Unknown, OTP Message not Sent	YES	YES
		ERR_0502	Operator not Found, OTP Message not Sent	YES	YES
		ERR_0503	Operator not Found, OTP Message not Sent	YES	YES
		ERR_0504	Error during persist OTP Message	YES	YES
		ERR_0505	Technical Error, OTP Message not Sent	YES	YES
ERR_0008	REENTER OTP	ERR_0506	Maximum number of generated OTP achieved	YES	YES
ERR_0010	START NEW TRANSACTION	ERR_0551	Maximum number of OTP retries achieved	YES	YES
		ERR_0553	Maximum number of password retries achieved	YES	YES
ERR_0011	NO ACTION	ERR_0102	Error, Merchant Blocked	NO	YES
		ERR_0103	Error, Merchant Deleted	NO	YES
		ERR_0107	Error, Site is deleted or blocked	NO	YES
		ERR_0108	Error, Merchant Blocked or Deleted by Operator	NO	YES
		ERR_0109	Error, Site is in trial	NO	YES
ERR_0012	NO ACTION	ERR_0602	Error in retrieving the type of Subscription Frequency	NO	YES
		ERR_0106	Site not opened for billing country	NO	YES
		ERR_0707	Price not Available	NO	YES
		ERR_9900	Invalid Input Parameters	NO	YES
		ERR_0100	Invalid Merchant	NO	YES
		ERR_0101	Invalid Site	NO	YES
		ERR_0104	Error, Site linked to Other Merchant	NO	YES
		ERR_0105	Error, Site not linked to Merchant	NO	YES
		ERR_0400	Error during transaction validation	NO	YES
		ERR_0451	Error, price is not Valid	NO	YES
ERR_0013	NO ACTION	ERR_0600	Error during Subscription Phase	YES	YES
		ERR_0601	Subscription not found for MSISDN	YES	YES
		ERR_0700	Error during retrieving Authentication for Billing Execution	YES	YES

		ERR_0701	Technical Error during Billing Phase	YES	YES
		ERR_0703	Not Billed	YES	YES
		ERR_0705	Billing Phase Timed Out	YES	YES
		ERR_0702	Fatal Error in Billing Phase	YES	YES
		ERR_0704	Not Billed, no retry possible	YES	YES
		ERR_0706	Not Billed, the MSISDN may be not valid	YES	YES
ERR_0014	REENTER OTP	ERR_0550	Invalid OTP entered	NO	NO
		ERR_0552	Invalid password	NO	NO
ERR_0015	NO ACTION (ALREADY SUBSCRIBED)	ERR_0603	Subscription Already Present for the MSISDN	NO	NO
ERR_0016	NO ACTION	ERR_0300	Operator Recognition, Critical Error	NO	NO
		ERR_0301	Operator Recognition, Technical Error	NO	NO
		ERR_0302	Operator Recognition, Operator not Found	NO	NO
		ERR_0404	Error during Operator Rules Evaluation	NO	NO
		ERR_0405	Operator not available	NO	NO
ERR_0017	NO ACTION	ERR_0409	Too many days without billing	NO	NO
ERR_0018	NO ACTION	ERR_0150	The Refund has not been authorized.	NO	NO
		ERR_0151	The transaction cannot be refunded because is too old.	NO	NO
		ERR_0152	The transaction cannot be refund because already refunded.	NO	NO
		ERR_0153	The amount to be refunded is not equal to the transaction amount.	NO	NO
		ERR_0154	The Operator does not accept the refund, for invalid request.	NO	NO
		ERR_0155	There is not a transaction for the specified input parameters.	NO	NO
		ERR_0156	The transaction cannot be refund it is not in a compatible status.	NO	NO
		ERR_0157	Refund not enabled for this operator	NO	NO
ERR_0019	NO ACTION	ERR_0158	Invalid Promo	NO	YES
		ERR_0159	Expired Promo	NO	YES
		ERR_0160	Promo Already Used	NO	YES
		ERR_0161	Promotion Overlapping	NO	YES
		ERR_0162	Invalid Profile (it's returned only if the operator is Movistar Spain)	NO	YES
ERR_0050	INSERT NEW MSISDN	ERR_0110	MSISDN format invalid	NO	NO
ERR_0051	INSERT NEW	ERR_0111	MSISDN value not present	NO	NO

	MSISDN					
ERR_0052	INSERT NEW OTP	ERR_0112	OTP format invalid	NO	NO
ERR_0053	INSERT NEW OTP	ERR_0113	OTP value not present	NO	NO
ERR_0054	NO ACTION	ERR_0133	Service unavailable it notify a wrong action at start	NO	YES
		ERR_0135	Service unavailable for wrong action call or an inexistent one	NO	YES
		ERR_0136	Service unavailable, not business user	NO	YES
ERR_0055	NO ACTION	ERR_0124	Session expired or timeout	NO	YES
ERR_0056	NO ACTION	ERR_0126	Price for Operator recognized not supported	NO	YES
ERR_0057	NO ACTION	ERR_0127	Operation aborted by user.	NO	YES
ERR_0058	NO ACTION	ERR_0303	Recognition methods not available	NO	YES

[1] :Only for subscription, the behavior of the error returned may be different, based on how the service has been configured. For further information contact DOCOMO Digital team.