



INSTALLATION TUTORIAL FOR THE ONLINE PAYMENT API

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I. Introduction

I.1 Company Overview

DOHONE (INNOV FOR YOU) is a Cameroonian company that has specialized since 2015 in highly secure e-commerce solutions, helping its customers to implement innovative processes at the heart of their business, as well as in the integration of next-generation solutions.

I.2 Context of the document


This document is a DOHONE online payment api installation manual, on your online sales site. This module will allow your customers to pay for your items or services directly online.

II. Pre-requisites

II.1 Technical Competences

The installation of this module is simple, but nevertheless requires technical skills in the development of sites or web applications.

II.2 The Merchant Code

 Before you begin the installation, rest assured that you have already created an account on DOHONE. And to have already received by mail your **merchant code**. This unique identifier code is obtained following your request, and will be used later in this tutorial.

If you do not yet have a merchant code, write a simple email addressed to infos@my-dohone.com. In this mail, you simply ask that you want to have a merchant code, linked to your account, and specify the phone number of your account. You will receive it later in the hours or minutes that follow.

Attention, to receive your merchant code, you will have to have completed the administrative formalities :

- Contract signature
- Deposit of a trade register for your company, necessary for operators and financial administrations, in the fight against money laundering and web-crime.

III. Installation

III.1 Phase 1 : intégration

III.1.1 Intégration basic

L'installation basic de l'API se résume en un formulaire HTML qui se présente comme suit :

```
<form method="post" action="https://www.my-dohone.com/dohone/pay">
  <input type="hidden" name="cmd" value="start">
  <input type="hidden" name="rN" value=" Jack Laprune">
  <input type="hidden" name="rT" value="6xxxxxxxx">
  <input type="hidden" name="rH" value="XXXXXXXX">
  <input type="hidden" name="rI" value="XXXX">
  <input type="hidden" name="rMt" value="500">
  <input type="hidden" name="rDvs" value="XAF">
  <input type="hidden" name="source" value="my Shop Name">
  <input type="hidden" name="endPage" value="http://www.your-site.com/success.php">
  <input type="hidden" name="notifyPage" value="http://www.your-site.com">
  <input type="hidden" name="cancelPage" value="http://www.your-site.com">
  <input type="submit" value="Valider">
</form>
```

III.1.2 Complete list of parameters

cmd	Value = "start" This Value must not be changed and it is Mandatory
rN	name of your customer making the payment. it is optional.
rT	Telephone number of the customer making the payment (Mandatory)
rE	Email address of the customer making the payment. it is optional.
rH	Your Merchant Code which is available on the « profile » page of your DOHONE account (Mandatory) or that you received by email.
rI	The number of your order. If your system does not manage an order number, you can remove this field. it is optional.

rMt	TOTAL amount of purchases (Mandatory). This is the amount that will need to be paid by your customer. By default, the currency of this amount is the euro, Unless you specify another currency under the 'rDvs' parameter below.
rDvs	The currency corresponding to the amount you specified. This parameter is optional. In case you do not specify this parameter, the currency is EUR. You have the choice between 3 currencies only: EUR, XAF, USD
rOnly	<p>This is optional. If you want your API to only display certain operators, you can specify those operators here. 1 = MTN, 2 = Orange, 3 = Express Union, 5 = Visa via UBA, 10 = Dohone, 14 = Visa via Wari, 15 = Wari card, 16 = VISA / MASTERCARD, 17 = YUP.</p> <p>You can specify more than one, separated by a comma. Example: 1, 2, 3, 17</p> <p>In the event that you choose just one operator, the customer's payment telephone must be the telephone provided under the "rT" parameter.</p>
rLocale	the choice of language. fr or en
source	The commercial name of your site (Mandatory)
endPage	Redirection address in case of SUCCESS payment (Mandatory)
notifyPage	Automatic notification address of your site in case of successful payment (optional)
cancelPage	Redirection address in case of cancellation of payment by the customer (Mandatory)
logo	a url address leading to the logo of your site if you want to see this logo appear during payment (Optional)
motif	the pattern is optional. If specified, it will be recorded in your DOHONE history (Excel version). This can be important for your accounting.
numberNotifs	<p>Number of times / attempts to notify your server by DOHONE, to your notifyPage. Default = 1. Max = 5.</p> <p>DOHONE will notify your server this number of times, for each transaction. This parameter is optional.</p>
rUserId	In critical payers' security environments against Web-Crime, or in environments where you continually contact DOHONE via the same http session (for any client combined), This setting allows DOHONE to better manage your clients. You provide the ID of your customer's account in your system. This parameter is optional.



To charge a customer, this means to send this form to DOHONE duly filled in by your system.

This form must be submitted via the **POST** method, to the following URL:

<https://www.my-dohone.com/dohone/pay>

If the customer makes his payment, this money will automatically go into your DOHONE account, and you will be notified instantly by MAIL.

The customer can cancel the payment at any time and return to your web site. In this case, he will be redirected to the page you gave under the parameter « **cancelPage** ».

Once the payment has been made, the client will be offered to return to your web site. Then, he will be redirected to the page you gave under the parameter « **endPage** ».



Under the « **rH** » parameter you must specify the **merchant code** you received by mail.



Finally, it is important that the customer's name, email address, and customer's phone number are effectively those of the customer, not yours.



Well, the first part of the installation is completed. At this level, you can already receive payments on your web site to your DOHONE account.



In the next phase, we will show you how your web site will automatically receive a payment confirmation, so that it can automatically validate the order or the customer's cart.



Be aware that this API can also work without a GUI. You can initiate a mobile money payment without the use of the DOHONE GUI. The installation tutorial for this API is provided in another document. Just download it at the following address : [cliquez ici](#).

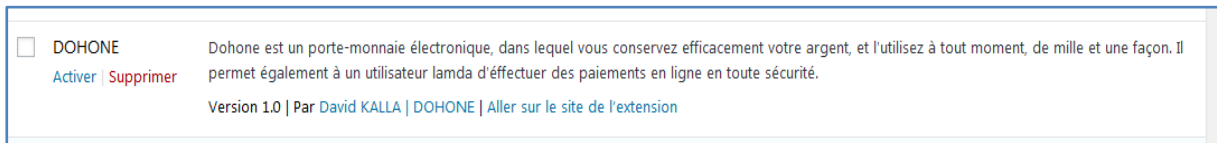


If your site needs to automate money transfers to various recipients, know that there is also a third API that makes you effective : [cliquez ici](#).

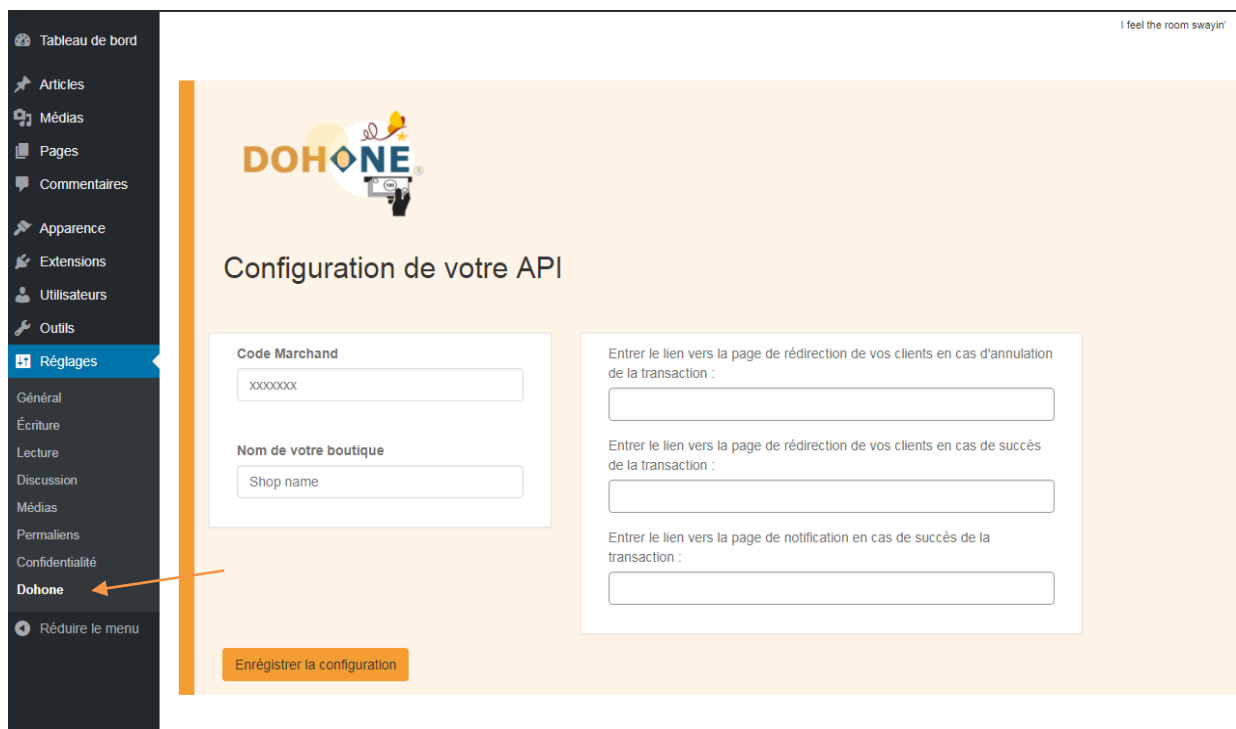
III.1.3 Integration in the CMS WordPress

To integrate the payment module of Dohone in your website realize with wordpress, you have to download first the module on the address: [Belong Here](#).

- ✚ Unzip the file and put the “**dohone**” folder in your wordpress modules directory (.../wp-content/plugins/),
- ✚ open the “**notif.php**” in your text editor, and set up “your confirmation action” of your payment after receiving the notification of Dohone server. (Ref. Chapter III.2)
- ✚ Put the file in a public directory of your website.
- ✚ Open your wordpress dashboard and go to the plugins; you would see a new plugin name “**DOHONE**” as illustrated in the following picture:



👉 Activate the plugin so that you can be able to use it in your website. After that, go to the submenu **Settings/Dohone** and set up your API configuration :



In the field <<**Entrez le lien vers la page de notification en cas de succès de la transaction**>> : enter the link (URL) of the **notif.php** page that you have already set. Then, Save the settings.

Put this short code << **[dohone_pay_form]** >> in the specific page that you want to make the payment. This is the result that you would get :

INFORMATIONS DE FACTURATION

Vous serez redirigé vers la page de paiement pour votre facture selon l'opérateur de votre choix.





Good job you have integrate successfully the module of the API Dohone in your website.

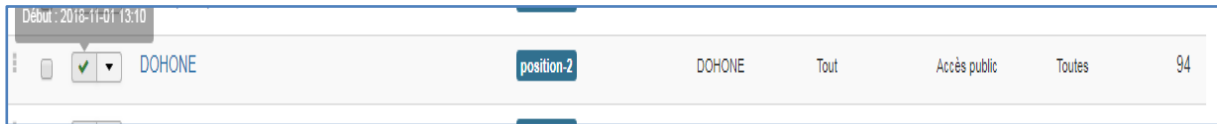
NB: Please don't forget to set up all the settings of the "**pay-dohone.php**" file that is located in the "**dohone**" folder.

III.1.4 Integration in CMS Joomla

To integrate the payment module of Dohone in your website realize with joomla, you have to download first the module on the address: [Belong Here](#).

- ✚ Unzip the file and go to your website dashboard
- ✚ Click on the menu "**extensions**" and go to the submenu "**Manage/Install**"
- ✚ Upload the zip file "**dohone**" and Joomla would install it

- ✚ Open the "**notif.php**" in your text editor, and set up your "confirmation action" of your payment after receiving the notification of Dohone server. (Ref. Chapter III.2)
- ✚ Put the file in a public directory of your website.
- ✚ Open your joomla dashboard and go to the **extensions/modules** ; you would see a new plugin name **DOHONE** as illustrated in the following picture:



👍 Activate the plugin so that you can be able to use it in your website. After that, click on the module and set up your API configuration.

▶ In the field <<**Entrer le lien vers la page de notification en cas de succès de la transaction**>> : enter the link (URL) of the **notif.php** page that you have already set.

👍 Good job you have integrate successfully the module of the API Dohone in your website.

NB: Please don't forget to set up all the settings of the **helper.php** file that is located in the **.../modules/mod_dohone** folder.



INFORMATIONS DE FACTURATION

Vous serez redirigé vers la page de paiement pour votre facture selon l'opérateur de votre choix.



Enter your Name

Enter your phone number

Your Email

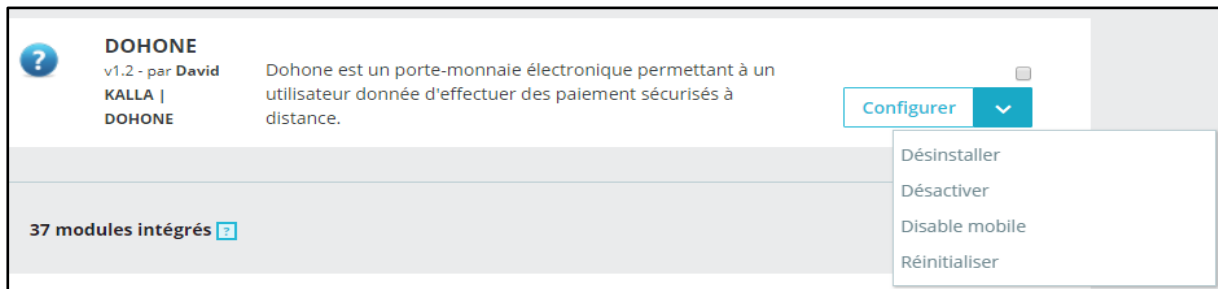
Démarrer le paiement



III.1.5 Integration in CMS PrestaShop

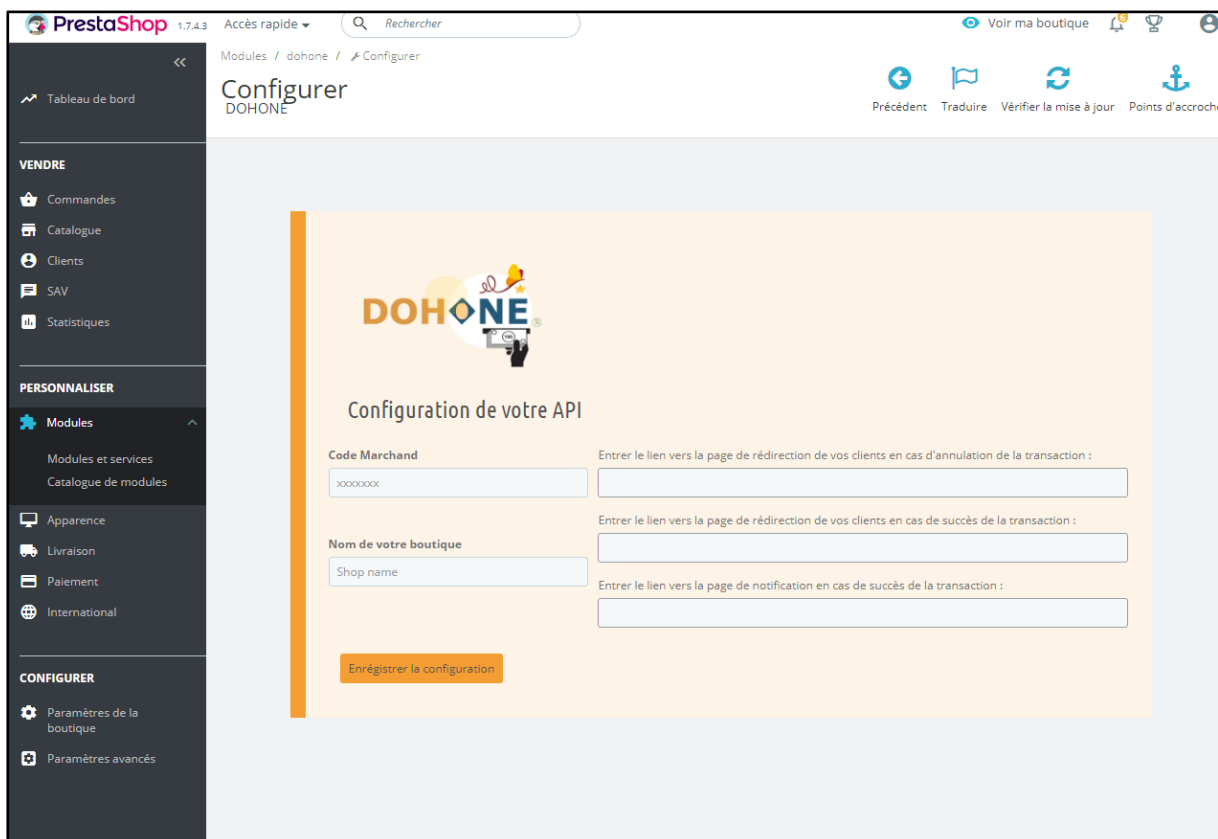
To integrate the payment module of Dohone in your website realize with PrestaShop, firstly you have to download the module on the address : [Belong Here](#).


- ✚ Unzip the file and go to your website dashboard
- ✚ Click on the submenu **modules and services** and click on **Install module**
- ✚ Upload the zip file **"dohone"**, and PrestaShop would install it. Refresh the page to see the result as illustrated in the following picture.




- ✚ Open the **"notif.php"** in your text editor and set up "your confirmation action" of your payment after receiving the notification of Dohone server. (Ref. Chapter III.2)
- ✚ Put this file in a public directory of your website.

After PrestaShop have installed the module, he would activate and display it in the Home hook of your website. To configure your API, you have to click on configuration.



 In the field <<**Entrer le lien vers la page de notification en cas de succès de la transaction**>> : enter the link (URL) of the **notif.php** page that you have already set.

 Good job you have integrate successfully the module of the API Dohone in your website.

INFORMATIONS DE FACTURATION

Vous serez redirigés vers la page de paiement pour votre facture selon l'opérateur de votre choix .



NB: Please don't forget to set up all the settings of the "**dohone.tpl**" file that is located in the **.../modules/dohone** folder.

III.2 Phase 2 : response and outcome

Your site or system will certainly need to be notified of the success of the payment transaction (whether the customer has clicked on the back button, or not), so that your website can validate the order or shopping cart of this customer, or do other operations specific to you.

All this happens on the page you specified via the parameter « **notifyPage** ».



This page is called in the background, automatically when the payment is made, without the user realizing it. In fact this does not happen on the Internet user's browser; but it is rather the DOHONE server itself which automatically launches this page (HTTP request) upon successful payment. So while the user will still be on the end-of-payment page on DOHONE, your website will already have received an http request in background to notify you of the success of the operation.

This http request from DOHONE is sent via the GET method and contains 7 main parameters :

- The **identifier of the command** you sent, here under the parameter « **rI** »
- The **amount** that the customer paid, here under the parameter « **rMt** »
- The **currency** corresponding to this amount, under the parameter « **rDvs** »
- The **reference of this transaction** on the DOHONE side, under the parameter named « **idReqDoh** »
- The **merchant code** of the DOHONE account that received this payment. That is, your merchant code normally, **unless the request would have been diverted by a third party**. Under the parameter « **rH** ».
- The **method of payment** (operator) of the customer, under the parameter « **mode** »
- The **reason for payment** you specified at the start of the payment request, under the parameter « **motif** »,
- The **hash** : it is a hash generated by DOHONE via MD5 Method, which will allow you to check the integrity and the origin of this notification. Under the parameter named "**hash**". To use this parameter, go to chapter III.2.1.2.

This request is to notify you that your order XXXX has just been paid a certain amount, in a certain currency, and that the reference of this transaction on DOHONE is XXXXXXXXXX.



Upon receipt of this request, you must carry out the following 4 operations in your system, in order to validate your basket or your order in complete safety.

1. Make sure that this query to your page comes from DOHONE. Because a hacker should not have fun making such a request to validate his order himself. You should therefore ask DOHONE if it recognizes a transaction whose reference is XXXXXXXXXX,



and that this transaction was used to pay an amount equal to XXXXX XAF, for your order XXXX. Dohone will answer yes or no.

2. Verify that the identifier of the command in question exists in your database, and that it has not yet been validated.
3. Verify that the amount you know of your order is the amount you receive from DOHONE. Because a hacker could arrange to pay correctly to DOHONE a lower amount, and you pass this notification to validate the order for an even higher amount.
4. Verify that the "Merchant Code" that received the payment is yours.
5. The last step is simply to save the command finally, if all the barriers are checked and crossed.

III.2.1 Step 1: Verification of the origin and integrity of the request

III.2.1.1 Method 1 : By Hashing (encryption) via MD5

The first method to verify the integrity and origin of the notification you just received from DOHONE is to perform an MD5 hash comparison.

In fact, DOHONE sends you a string of encrypted characters, via the "hash" parameter; you must succeed in reconstituting this chain by doing the same encryption; then you compare your result to the chain transmitted by DOHONE. If the two channels are identical, you can continue processing the payment of the customer, with confidence.

It is therefore an MD5 (base 16) encryption, of the concatenation of some of your parameters with your hashing code linked to your account. This code of hash is obtained by consulting your "profile parameter page" on your DOHONE account online, or following your request, by mail addressed to infos@my-dohone.com.

Below is the formula for generating the value of the **hash** parameter:

MD5 (idReqDoh + rI + rMt + hashing code)

NB : the sign + here means just concatenation. And there is no space between these parameters.

- ***idReqDoh** : Payment ID in your DOHONE account. Parameter that you receive when notifying DOHONE to your server.*

- ***rI*** : Reference of the transaction in your system. Parameter that you know in your system and that you also receive when notifying DOHONE to your server. This is your order reference, which you sent to DOHONE during the initialization of the payment. If you do not manage the command references in your system, ignore this setting here.
- ***rMt*** : the amount of the initial transaction that you sent to DOHONE for payment (in FCFA, XAF). It's parameter you also receive when notifying DOHONE to your server (in XAF). This amount must be in XAF, and must not contain any spaces, no "points", no "commas" (just numbers).
- ***Code de hashage*** : this is your signature code, which will allow encryption privately. The hash code is obtained by consulting your "profile setting page" on your DOHONE account online.

In summary, you concatenate the 4 parameters without space between them, and you encode the result in MD5 BASE 16.

The result obtained must be similar to the value that DOHONE sends to you in the "hash" parameter, during the notification to your server.

For example :

String to encrypt : 6154698745212458 + 1001 + 3000 + 20E16B94120019CA879

MD5 (61546987452124581001300020E16B94120019CA879)

Result encrypted : b891d6a8aed2038c06a0aefc9e6381a7

III.2.1.2 Method 2: By sending the "Verify" command to DOHONE **(OBSOLETE)**

This method is obsolete. It is no longer functional on DOHONE. We unadvise to use it.

To do this with DOHONE, simply return the same received parameters to DOHONE at the address : <https://www.my-dohone.com/dohone/pay>

Before sending this http request, add a new parameter named « **cmd** » with the value « **verify** ».

You can send this request via POST or GET, according to your convenience.

For example :

<https://www.my-dohone.com/dohone/pay?cmd=verify&rI=13&rMt=10400&idReqDoh=98778451>

DOHONE give you the result, « **OK** » text or « **NO** », depending on whether or not it recognize this transaction



III.2.2 Step 2

You must verify in your database that the order identifier that arrives by this request exists and that it was not yet validated.

III.2.3 Step 3

Verify that the amount you know of your order is the amount you receive from DOHONE. Because a hacker could arrange to pay correctly to DOHONE a lower amount, and you pass this notification to validate the order for an even higher amount.

III.2.4 Step 4

Verify that the "Merchant code" that received the payment is yours. In the event that a hacker could misappropriate your payment request, it is recommended to verify that the payment made by the customer has been deposited in your DOHONE account to you. To do this, you must compare the value of the « rH » parameter you receive with your « merchant code » that you know.

III.2.5 Step 5

Finally save the command in your database, if all barriers are checked and crossed. The treatment of step 5 is done at your convenience, depending on your objectives.



If you have arrived here, you have successfully completed the installation. It only needs to be tested and used. Congratulations.



Note : Please note that (and remember that), the request sent automatically by DOHONE to your «**notifyPage**» is made directly from the DOHONE server, and not from the browser of the user. So while you are processing this query on this page, **do not expect** to find any values that you would have set in session. Because everything happens as if it were another session squarely.



Note : Remember that this query issued by the DOHONE server is done in the background. So do **not bother to** put "echo" on your page, or "print". They will not be displayed on the browser screen. Because everything happens in the background. To see your execution traces, you have to write logs on file, then go to the file. Similarly, for your tests, do not use the « **localhost** » address in the «**notifyPage**» parameter sent to dohone on the form, because DOHONE will not be able to join your localhost remotely.



Note : Remember that when the customer ends up paying, he will be offered to return to your site. Thus, the redirect on the **page** « endpage ».

Do not hesitate to write to us in case of question to the address infos@my-dohone.com.

Dohone thanks you.