FlexPay Subscription API v3

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|--------------------|-------------------------|
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Introduction

FlexPay API allows dynamically set parameters for Verotel Order Pages. This is especially useful when integrating with eCommerce or other systems which use dynamic pricing.

FlexPay version 3 offers two types of orders:

- purchase
- subscription

The main difference between purchase and subscription is that **subscription** has some duration - a time period - for which it is active while **purchase** is just a simple one-off sale.

The subscriptions can be of two types:

- "one-time" subscriptions simply expire after a given time.
- "recurring" subscriptions Verotel will attempt to rebill the buyer periodically until the subscription is cancelled or terminated. Recurring subscriptions can have a trial period.

This document provides the description of v3 FlexPay Subscription API.

Setup

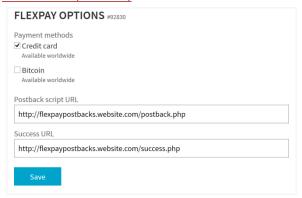
• Create a FlexPay website in *Control Center > Setup Websites*. From the *Website detail* page you will now have access to several configuration options.



• Configure the "Postback script" and the "Success page" URLs in FlexPay options page.

(SEE POSTBACK SUMMARY AND DATA POSTED TO SUCCESS URL UPON THE FLEXPAY SUBSCRIPTION

TRANSACTION (OK DATA)



• As subscription FlexPay only supports Credit card payment method, this method needs to be enabled in order for the "startorder" request to work.

FLEXPAY OPTIONS #64233

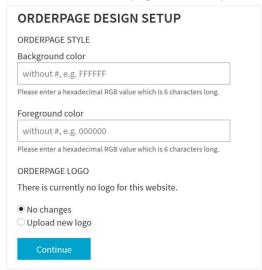




Get the FlexPay "Signature Key" - this can be found on the same page. This key is used for
calculating signatures to ensure integrity of data in requests and postbacks (<u>SEE CALCULATING</u>
<u>SIGNATURE</u>).



• Customize the order page to match your website design



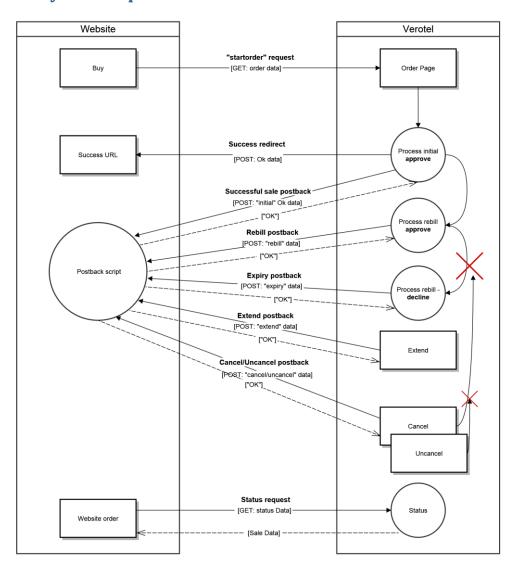
• Additionally you can require the buyers to enter their billing address by enabling this option in the *Orderpage options* section. You can also restrict sales to one of the predefined territories.

ORDERPAGE OPTIONS



• NEXT: Integrate the Verotel OrderPage to your website.

FlexPay Subscription interactions



While FlexPay purchase is a once-off operation without any active time period, subscription has a duration for which it is active.

During this period Verotel system sends various postback calls notifying the webmaster's system about the subscription state. If the subscription is recurring, Verotel system manages periodical charges (rebills) of the buyer's credit card.

A new subscription order starts with a subscription "startorder" request

The "startorder" subscription request is used to redirect buyer to the Verotel Order Page in order to process subscription with a given amount, duration and currency.

SEE "CONSTRUCTING SUBSCRIPTION "STARTORDER" REQUEST"

Once the initial transaction is successfully processed the enduser is redirected to the "success URL"

Verotel system also sends a set of data ("OK data") describing the sale along as HTTP parameters.

SEE "DATA POSTED TO SUCCESS URL UPON THE FLEXPAY SUBSCRIPTION TRANSACTION (OK DATA)"



Successful initial sale postback ("OK data") is sent in the background

The "initial" OK data postback is sent to the nominated "Postback URL" immediately after the sale has been processed.

The postback is sent only for successfully approved transactions. The data in the postback provide essential information about the sale. If more information is needed, for example billing address or email address of the buyer, the merchant should <u>query the status page</u>.

Important: The Verotel system expects "**OK**" response otherwise an automated refund will be issued (for Credit Card payments).

SEE "'OK DATA' POSTBACK CALL"

The follow-up actions depend on the subscription type

If the subscription is "one-time"

- a) Subscription will expire after the given period (subscription can also be terminated, by performing refund or in case Verotel receives a chargeback request) and the "expiry" postback is sent to inform the webmaster's system about the "end-of-life" event. (SEE "'EXPIRY' POSTBACK CALL")
- b) If the webmaster or Verotel staff extend the subscription from Verotel Control Center then the "extend" postback is sent. (SEE "'CANCEL' POSTBACK CALL")

If the subscription is "recurring"

- a) Verotel system will attempt to rebill the enduser again at the end of the current period. If the rebill is successful the website will receive "rebill" postback.

 (SEE "'REBILL' POSTBACK CALL")
- b) The "expiry" postback is sent in case the last rebill got declined or the next rebill was cancelled and the subscription ended. (And of course subscription can also be terminated by performing refund or Verotel receives a chargeback request). (SEE "'EXPIRY' POSTBACK CALL")
- c) Enduser, Merchant or Verotel staff can cancel further rebills in this case the "cancel" postback gets sent and the subscription expires at the end of the current active period. (SEE "'CANCEL' POSTBACK CALL")

The cancel action can be reverted by Verotel staff in which case the "uncancel" postback informs the webmaster's website and there will be again a rebill at the end of the current rebill period. (SEE "'UNCANCEL' POSTBACK CALL")

Postback summary

- "initial" Successful sale informs about a successful initial transaction
- "extend" is sent when subscription duration is manually extended either by the webmaster or Verotel support staff
- "expiry" is sent when a subscription is terminated and ends.

Recurring subscription specific postbacks

- "rebill" informs about a successful rebill in the case of recurring subscription
- "cancel" is sent when the recurring subscription rebill is cancelled by enduser, webmaster or Verotel support. This means that although the subscription



- might still be active, there will be no more rebills in the future and the subscription will expire at the end of the current period.
- "uncancel" is sent in case the subscription cancel gets reverted by Verotel support.

Sale status request

Although it is an optional step, we recommend that you cross check the received data with the Verotel Status service. You need send the Verotel transaction ID or the sale Reference ID (if you have provided one in the "**startorder**" request) to the Verotel status script in order to verify the status of the transaction. Usually, this extra check is performed before the buyer is informed that the transaction was successfully processed. The Verotel Status service can be used anytime after the transaction took place and it will give you information about the current state of the subscription. (See "FlexPay STATUS PAGE REQUEST")



Technical details

Constructing subscription "startorder" request

The FlexPay subscription call is used to redirect the buyer to the Verotel Order Page in order to process one-time or recurring payment subscriptions.

The "startorder" request for FlexPay purchase consists of number of parameters passed to "https://secure.verotel.com/startorder?" for Verotel accounts or "https://secure.billing.creditcard/startorder?" for CardBilling accounts and is secured by a signature. The "subscriptionType" parameter specifies which of the two subscription types is to be created:

- "one-time" subscriptions simply expire after the time specified in "period" parameter.
- "recurring" subscriptions will attempt to rebill the buyer in order to stay active.
 The initial period can have different price and duration (set via "trialPeriod" and "trialAmount" parameters) then the following rebill periods (specified in "period" and "priceAmount" parameters).

| Parameter Type Optional / Mandatory Description version number mandatory version of the flexpay call, "3" for this version shopID number mandatory numerical ID of the shop or website in the system | |
|--|-----------|
| shopID number mandatory numerical ID of the shop or website in the | |
| | |
| | e Verotel |
| type string mandatory "subscription" | |
| subscriptionType string mandatory "one-time" or "recurring" | |
| priceAmount number mandatory amount to be processed in nnn.nn formation | |
| priceCurrency string mandatory 3 char ISO code, must be one of the Sale currencies (USD, EUR, GBP, AUD, CAD, CINOK, SEK) | HF, DKK, |
| period string mandatory duration in ISO8601 format, for example: minimum is 7 days for "recurring" and 2 "on-time" | • |
| trialAmount number optional amount to be processed in nnn.nn formatic recurring only initial trial period, minimum is 2 days | for the |
| trialPeriod string optional duration in ISO8601 format, for example: recurring only | P30D |
| name string optional name of the subscription. Text is displaye order page | d on the |
| referenceIDstringoptionalMerchant's reference identifier. It must be if provided | e unique |
| custom1 string optional pass-through variable - max 255 printabl characters | 9 |
| custom2 string optional pass-through variable - max 255 printable characters | |
| custom3 string optional pass-through variable - max 255 printable characters | ! |
| email string optional email of the buyer. If not set, it will be coon the Order Page NOTE: email is excluded from signature calculations | lected |
| paymentMethodstringoptionalpayment method, only "CC" is currently | |

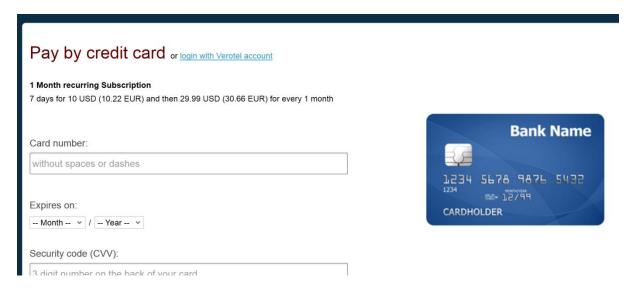


| | | | supported for subscriptions; |
|-----------|--------|----------|--|
| signature | string | optional | security token to verify the integrity of the |
| | | | postback data (<u>SEE CALCULATING SIGNATURE</u>) |

Example "startorder" request:

https://secure.verotel.com/startorder?name=1+Month+recurring+Subscription&period=P1M&priceAmount=29.99&priceCurrency=USD&shopID=64233&type=subscription&subscriptionType=recurring&trialAmount=10&trialPeriod=P7D&version=3&signature=a1eaced551d406f0227e32759e743c6b5269f7e3

Opens the Order Page for sale which will be recurring every 1 month and has a 7 day trial period:



Data posted to success URL upon the FlexPay Subscription transaction (OK data)

After a successful transaction, the buyer is redirected to a nominated "Success URL" and a set of data describing the sale is sent along as HTTP parameters.

| Parameter | Туре | Description |
|---------------------------|--------|---|
| shopID | number | website id |
| type | string | "subscription" |
| subscriptionType | string | "one-time" or "recurring" |
| event | string | "initial" |
| referenceID | string | Merchant's reference identifier if provided. |
| saleID | number | identifier of the sale in the Verotel system |
| priceAmount | number | amount processed in nnn.nn format |
| priceCurrency | string | 3 char ISO code of the Sale currency |
| period | number | subscription duration in ISO8601 format |
| trialAmount | number | amount processed in nnn.nn format for the initial trial period |
| trialPeriod | string | duration in ISO8601 format |
| expiresOn or nextChargeOn | date | date of next rebill or expiry date [yyyy-mm-dd] e.g "2015-04-24" |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| paymentMethod | string | used payment method |
| signature | string | security token to verify the integrity of the postback data (SEE CALCULATING SIGNATURE) |



'OK data' postback call

OK data postback is sent to the postback URL immediately after the sale has been processed.

OK data is sent only for successfully approved transactions. The data in the postback provide essential information about the sale. If more information is needed, for example billing address or email address of the buyer, the merchant should query the <u>status page</u>.

Important: The Verotel system expects "**OK**" response otherwise an automated refund will be issued.

| Parameter | Туре | Description |
|------------------------------|--------|--|
| shopID | number | numerical ID of the shop or website in the Verotel system |
| type | string | "subscription" |
| subscriptionType | string | "one-time" or "recurring" |
| event | string | "initial" |
| referenceID | string | merchant reference identifier. It must be unique if provided |
| saleID | number | identifier of the sale in the Verotel system |
| priceAmount | number | amount to be processed in nnn.nn format |
| priceCurrency | string | 3 char ISO code of the Sale currency |
| period | number | duration in ISO8601 format, for example P30D |
| trialAmount | number | amount charged for the trial period, nnn.nn format. |
| trialPeriod | string | duration in ISO8601 format, for example P30D |
| expiresOn or nextChargeOn | date | date when the cancelled or one-time subscription expires, or date of the next planned rebill [yyyy-mm-dd] e.g "2015-04-24" |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| paymentMethod | string | payment method used for the payment, currently only "CC". |
| signature | string | security token to verify the integrity of the postback data (SEE CALCULATING SIGNATURE) |

'Rebill' Postback call

Rebill postback call is sent to the merchant's URL immediately after a successful rebill transaction.

| Parameter | Туре | Description |
|-------------------|--------|--|
| shopID | number | numerical ID of the shop or website in the Verotel system |
| type | string | "subscription" |
| subscriptionType | string | "recurring" |
| event | string | "rebill" |
| referenceID | string | Merchant's reference identifier if provided |
| saleID | number | identifier of the sale in the Verotel system |
| amount | number | amount processed in nnn.nn format |
| currency | string | 3 char ISO code of the Sale currency |
| nextChargeOn | date | date of the next planned rebill [yyyy-mm-dd] e.g "2015-04-24" |
| subscriptionPhase | string | "normal" (or "discounted" if cancel discount was accepted - not yet supported) |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| paymentMethod | string | payment method used for the payment, currently only "CC" is possible. |

| Parameter | Туре | Description |
|-----------|--------|--|
| signature | string | security token to verify the integrity of the postback data (SEE |
| | | CALCULATING SIGNATURE |

'Cancel' Postback call

Cancel postback call is sent to the merchant's URL after the subscription is cancelled by the buyer, merchant, Verotel support or by the system.

| Parameter | Туре | Description |
|-------------------|--------|---|
| shopID | number | numerical ID of the shop or website in the Verotel system |
| type | string | "subscription" |
| subscriptionType | string | "recurring" |
| event | string | "cancel" |
| referenceID | string | merchant reference identifier if provided |
| saleID | number | identifier of the sale in the Verotel system |
| expiresOn | date | date when the cancelled subscription expires [yyyy-mm-dd] e.g "2015-04-24" |
| subscriptionPhase | string | "trial", "normal" (or "discounted" if cancel discount was accepted - not yet supported) |
| cancelledBy | string | "user", "support", "merchant", or "system" |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| signature | string | security token to verify the integrity of the postback data (SEE CALCULATING SIGNATURE) |

'Uncancel' Postback call

Occasionally, buyers wish to revert cancellation of their subscription. Uncancel can be done only by Verotel support. The postback call is sent to the merchant's postback URL immediately after the subscription was uncancelled.

| Parameter | Туре | Description |
|-------------------|--------|--|
| shopID | number | numerical ID of the shop or website in the Verotel system |
| type | string | "subscription" |
| subscriptionType | string | "recurring" |
| event | string | "uncancel" |
| referenceID | string | merchant reference identifier. It must be unique if provided |
| saleID | number | identifier of the sale in the Verotel system |
| nextChargeOn | date | date of the next planned rebill |
| subscriptionPhase | string | "trial", "normal" (or "discounted" if cancel discount was accepted |
| | | - not yet supported) |
| uncancelledBy | string | "support" |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| signature | string | security token to verify the integrity of the postback data (SEE |
| | | CALCULATING SIGNATURE |



'Extend' Postback call

Merchant or Verotel support may grant extra days to an active subscription. This means that the expiration date or the date of the next planned rebill gets shifted by number of days to the future. The extend postback is then sent to merchant's postback URL to notify the merchant about that the subscription got extended.

Please note that the extend postback is also sent when the merchant has "Rebill-retry" enabled and the first rebill is declined. In such situation the system extends the subscription as if the rebill was approved (sends the extend postback) and rebill retries are scheduled. If any of the retries is successful the subscription continues normally. If the last rebill retry fails then the subscription gets terminated early.

| Parameter | Туре | Description |
|---------------------------|--------|---|
| shopID | number | numerical ID of the shop or website in the Verotel system |
| type | string | "subscription" |
| subscriptionType | string | "one-time" or "recurring" |
| event | string | "extend" |
| referenceID | string | merchant reference identifier if provided |
| saleID | number | identifier of the sale in the Verotel system |
| nextChargeOn or expiresOn | date | date when cancelled or one-time subscription expires, or date of the next planned rebill [yyyy-mm-dd] e.g "2015-04-24" |
| subscriptionPhase | string | "trial", "normal" (or "discounted" if cancel discount was accepted - not yet supported) |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| signature | string | security token to verify the integrity of the postback data (SEE CALCULATING SIGNATURE) |

'Expiry' Postback call

Expiry postback call is sent to the merchant's postback URL when the subscription gets terminated. The reason for the termination could be the end of a cancelled subscription, declined rebill transaction, refund, chargeback or termination by Verotel support or the merchant.

| Parameter | Туре | Description |
|------------------|--------|--|
| shopID | number | numerical ID of the shop or website in the Verotel system |
| type | string | "subscription" |
| subscriptionType | string | "recurring" or "one-time" |
| event | string | "expiry" |
| referenceID | string | Merchant's reference identifier if provided |
| saleID | number | identifier of the sale in the Verotel system |
| custom1 | string | pass-through variable - max 255 printable characters |
| custom2 | string | pass-through variable - max 255 printable characters |
| custom3 | string | pass-through variable - max 255 printable characters |
| signature | string | security token to verify the integrity of the postback data (SEE |
| | | CALCULATING SIGNATURE |



FlexPay status page request

A status of a sale made with a FlexPay API can be reviewed by querying the status page. Status page provides complete information about the sale, the buyer, and its status.

Status request URL: "https://secure.verotel.com/status/order?" (Verotel) or "https://secure.billing.creditcard/status/order?" (CardBilling) followed by parameters in the table bellow:

| GET parameters in response | Description |
|----------------------------|---|
| version | Version of the Verotel Purchase OrderPage protocol. Currently "1", "2" or "3" |
| shopID | numerical ID of the website or shop in Verotel system |
| referenceID (optional) | Merchant's reference identifier if provided (referenceID OR saleID must be posted - NOT BOTH) |
| saleID (optional) | Verotel saleID identifier (referenceID OR saleID must be posted - NOT BOTH) |
| signature | SHA-1 hash generated on data listed above and Merchant's private key stringsha1_hex(signatureKey + ":referenceID=" + referenceID + ":saleID=" + saleID + ":shopID=" + shopID + ":version=" + version) |

Example:

https://secure.verotel.com/status/order?saleID=7285297&shopID=64233&version=3&signature=c361 89e5c5ec38e4b51416dcacd6d1d5c715d6a9

Flexpay Subscription Status response:

The date returned to the status request is in plain-text and contains lines with parameterName, colon, parameterValue:

| Output parameter name | Description |
|-----------------------|--|
| response | search response code: |
| | "FOUND" - purchase record found and returned |
| | "NOTFOUND" - purchase not found |
| | "ERROR" - error (see 'error' key) |
| description | Product description text |
| error | error message (for response=ERROR) |
| expired | "yes" or "no" |
| saleID | a unique identifier of the transaction in Verotel System |
| shopID | numerical ID of the website or shop in Verotel system |
| paymentMethod | an identifier of payment method that was used for the transaction. |
| | Currently can be "Credit Card" |
| priceAmount | amount to be processed. in nnn.nn format |
| priceCurrency | 3 char ISO code of the Sale currency |
| period | duration in ISO8601 format, for example: P30D |
| referenceID | Merchant's reference identifier if provided |
| subscriptionType | "recurring" or "one-time" |
| subscriptionPhase | "trial", "normal" or "discounted" |
| type | "subscription" |
| name | name of the buyer |
| email | email address of the buyer |



| Output parameter name | Description |
|---------------------------|--|
| country | selected or detected country ISO code (ISO 3166-1-alpha-2 code) |
| expiresOn or nextChargeOn | date when the cancelled or one-time subscription expires, or date of the next planned rebill [dd-mmm-yyyy hh:mm:ss] e.g. <i>16-APR-2014 09:20:23</i> |
| cancelled | yes/no |
| cancelledOn | date of cancel [dd-mmm-yyyy hh:mm:ss] e.g. 16-APR-2014 09:20:23 |
| cancelledBy | "user, "support", "merchant" or "system" |
| discountPrice | if cancel discount was accepted, the price after discount |
| createdOn | Timestamp of sale creation (dd-mmm-yyyy hh:mm:ss) e.g. 16-APR-2014 09:20:23 |
| saleResult | purchase processing result ("APPROVED") |
| billingAddr_fullName | billing address: full name field value |
| billingAddr_company | billing address: company field value |
| billingAddr_addressLine1 | billing address: 1st line field value |
| billingAddr_addressLine2 | billing address: 2nd line field value |
| billingAddr_city | billing address: city name |
| billingAddr_zip: | billing address: zip code / postal code |
| billingAddr_state | billing address: US state code (ISO 3166-2) |
| billingAddr_country | billing address: country ISO code (ISO 3166-1-alpha-2 code) |

Example response:

response: FOUND

shopID: 64233

paymentMethod: Credit Card

priceAmount: 51.20
priceCurrency: EUR

period: P1M

trialAmount: 2.95
trialPeriod: P3D

type: subscription

subscriptionType: recurring

description: some description of product

referenceID: AX62362I3

saleID: 13029033

createdOn: 27-DEC-2014 03:22:12

saleResult: APPROVED
name: John Black

email: black@example.com

country: GB

subscriptionPhase: trial

expired: no

expiresOn: 30-DEC-2015

cancelled: yes

cancelledOn: 28-DEC-2014

cancelledBy: user
discountPrice: 3.95

billingAddr_fullName: John Black

billingAddr_company:



```
billingAddr_addressLine1: Longstreet 3782/13
billingAddr_addressLine2:
billingAddr_city: London
billingAddr_zip: 73811
billingAddr_state:
billingAddr_country: GB
```

Calculating signature

The signature used in FlexPay requests and postbacks is calculated as SHA-1 hash (hexadecimal output) from the request parameters.

The first parameter has to be your signature Key, followed by the parameters ordered alphabetically by their names.

Optional arguments that are used (have value) must be contained in the signature calculation. Optional arguments that are not used must not be contained in the signature calculation.

The email parameter in "startorder" request is not included in the signature calculations.

It is mandatory to convert arguments values into UTF-8 before computing the signature.

e.g.

```
signature = sha1_hex( signatureKey + ":name=" + name + ":period=" + period + ":priceAmount=" + priceAmount + ":priceCurrency=" + priceCurrency + ":referenceID=" + referenceID + ":shopID=" + shopID + ":subscriptionType=" + subscriptionType + ":type=" + type + ":version=" + version )
```

Example calculation:

| Parameter | Value |
|------------------|--------------------------------|
| (signatureKey) | BddJxtUBkDgFB9kj7Zwguxde4gAqha |
| name | 1 Month Subscription |
| period | P1M |
| priceAmount | 9.99 |
| priceCurrency | USD |
| custom1 | ххуугг |
| subscriptionType | one-time |
| type | recurring |
| version | 3 |

signature = sha1_hex (BddJxtUBkDgFB9kj7Zwguxde4gAqha:custom1=xxyyzz:name=1 Month Subscription:period=P1M:priceAmount=9.99:priceCurrency=USD:shopID=64233:subscriptionType=one-time:type=subscription:version=3) => 721858402a06cf4315feef7e6ee163c05b4664d1

The FlexPay subscription request then is:

https://secure.verotel.com/startorder?custom1=xxyyzz&name=1+Month+Subscription&period=P1M&priceAmount=9.99&priceCurrency=USD&shopID=64233&subscriptionType=one-time&type=subscription&version=3&signature=721858402a06cf4315feef7e6ee163c05b4664d1

