
OmniToken Translator Transaction Info

The Token Translator functionality enables you submit a low value token in a request and receive PAN information in the response. This provides merchant the capability of allowing a third party service provider to access PAN information without accessing the information themselves. This methodology provides the third party the information they require to provide their service, while continuing to insulate merchant systems from contact with the PAN information.

The basic steps to this process are as follows:

1. The merchant obtains a low value token either via eProtect (i.e., normal operation of eProtect provides a LVT in place of the PAN) or by sending a transaction to the Worldpay eComm platform requesting a low value token in place of the submitted high value token.
2. The merchant supplies the low value token to their third party service provider. The lifespan of the LVT is 24 hours.
3. The third party service provider submits a request to translate the LVT and receives the PAN in the response message, allowing them to provide their service. The service provider can submit requests either as online or batch transactions.
4. The third party service provider supplies the merchant the required information.

This document discusses the transactional requirements for Step 3, including the message structure and element definitions, as well as testing requirement. The document has the following sections:

- [Example Account Number Access Requests and Responses](#)
- [Testing Account Number Access Transactions](#)
- [cnpAPI Elements](#)

Example Account Number Access Requests and Responses

This section provides information about the structure of both the Online and Batch versions of the Account Number Access Request and Response messages. Each section shows a high level view of the transaction, with links to the element definitions, followed by one or more cnpAPI examples.

Online Account Number Access Request Transaction

You must structure your Online Account Number Access request as shown below.

```
<onlineAccountNumberAccessRequest version="12.2" xmlns="http://www.vantivcnp.com/schema"
merchantId="100">
  <authentication>
    <user>User Name</user>
    <password>Password</password>
  </authentication>
  <translateToAccountNumberRequest id="GCQueryAuth" reportGroup = "Mer5PM1" customerId="1">
    <orderId>Optional Merchant Assigned Value</orderId>
    <paypageRegistrationId>Low Value Token</paypageRegistrationId>
  </translateToAccountNumberRequest>
</onlineAccountNumberAccessRequest>
```

Example: onlineAccountNumberAccessRequest Transaction

```
<onlineAccountNumberAccessRequest version="12.2" xmlns="http://www.vantivcnp.com/schema"
merchantId="100">
  <authentication>
    <user>User Name</user>
    <password>Password</password>
  </authentication>
  <translateToAccountNumberRequest id="translate1" reportGroup="abcde"
customerId="05555">
    <orderId>12345654321</orderId>
    <paypageRegistrationId>amNDNkpWckGN4Skh1TTQ1Z</paypageRegistrationId>
  </translateToAccountNumberRequest>
</onlineAccountNumberAccessRequest>
```

Online Account Number Access Response

For an Online request, the system returns a response message using the following structure:

```
<onlineAccountNumberAccessResponse version="12.2" xmlns="http://www.vantivcnp.com/schema"
response="0" message="Valid Format">
  <translateToAccountNumberResponse id="12345" reportGroup="xlateNum">
    <orderId>Value from Request</orderId>
    <card>
      <type>Type of Card</type>
      <number>Account Number</number>
      <expDate>The card expiration date</expDate>
    </card>
  </translateToAccountNumberResponse>
</onlineAccountNumberAccessResponse>
```

```

    <message>Explanation of the Response Code</message>
    <responseTime>Date and Time of the Response</responseTime>
  </translateToAccountNumberResponse>
</onlineAccountNumberAccessResponse>

```

Example: onlineAccountNumberAccessResponse

```

<onlineAccountNumberAccessResponse version="12.2"
  xmlns="http://www.vantivcnp.com/schema" response="0" message="Valid Format">
  <translateToAccountNumberResponse id="12345" reportGroup="NumBack">
    <orderId>12345654321</orderId>
    <card>
      <type>VI</type>
      <number>4100200300011001</number>
      <expDate>0421</expDate>
    </card>
    <response>803</response>
    <message>Valid Token</message>
    <responseTime>2018-01-06T16:40:30</responseTime>
  </translateToAccountNumberResponse>
</onlineAccountNumberAccessResponse>

```

Batch Account Number Access Request Transaction

You must structure your Batch Account Number Access request as shown below.

```

<batchAccountNumberAccessRequest version="12.2" numBatchRequests="2"
  xmlns="http://www.vantivcnp.com/schema">
  <authentication>
    <user>User Name</user>
    <password>Password</password>
  </authentication>
  <batchRequest id="12345" numTranslateToAccountNumberRequests="2" merchantId="100">
    <translateToAccountNumberRequest id="GetNum1" reportGroup = "GetNum" customerId="1">
      <orderId>Optional Merchant Assigned Value</orderId>
      <paypageRegistrationId>Low Value Token</paypageRegistrationId>
    </translateToAccountNumberRequest>
    .
    .
    .
  </batchRequest>

```

```
</batchAccountNumberAccessRequest>
```

Example: batchAccountNumberAccessRequest Transaction

```
<batchAccountNumberAccessRequest version="12.2" xmlns="http://www.vantivcnp.com/schema"
  numBatchRequests="1">
  <authentication>
    <user>User Name</user>
    <password>Password</password>
  </authentication>
  <batchRequest id="xlateB1" numTranslateToAccountNumberRequests="2" merchantId="100">
    <translateToAccountNumberRequest id="translate1" reportGroup="abcde"
  customerId="05555">
      <orderId>12345654321</orderId>
      <paypageRegistrationId>amNDNkpWckGN4Skh1TTQ1Z</paypageRegistrationId>
    </translateToAccountNumberRequest>
    <translateToAccountNumberRequest id="translate2" reportGroup="abcde"
  customerId="05555">
      <orderId>12345654322</orderId>
      <paypageRegistrationId>amNDNkqxtYGN4Skh1TTQ1M</paypageRegistrationId>
    </translateToAccountNumberRequest>
  </batchRequest>
</batchAccountNumberAccessRequest>
```

Batch Account Number Access Response

For a Batch request, the system returns a response message using the following structure:

```
<batchAccountNumberAccessResponse version="12.2" xmlns="http://www.vantivcnp.com/schema"
  response="0" message="Valid Format" cnpSessionId="987654">
  <batchResponse id="625345" cnpBatchId="8765467" merchantId="100">
    <translateToAccountNumberResponse id="12345" reportGroup="xlateNum">
      <orderId>Value from Request</orderId>
      <card>
        <type>Type of Card</type>
        <number>Account Number</number>
        <expDate>The card expiration date</expDate>
      </card>
      <response>Response Code</response>
      <message>Explanation of the Response Code</message>
```

```

    <responseTime>Date and Time of the Response</responseTime>
  </translateToAccountNumberResponse>
  .
  .
  .
</batchResponse>
</batchAccountNumberAccessResponse>

```

Example: batchAccountNumberAccessResponse

```

<batchAccountNumberAccessResponse version="12.2" xmlns="http://www.vantivcnp.com/schema"
  response="0" message="Valid Format" cnpSessionId="82834362428702736">
  <batchResponse id="xlateB1" cnpBatchId="344665" merchantId="100">
    <translateToAccountNumberResponse id="translate1" reportGroup="abcde">
      <orderId>12345654321</orderId>
      <card>
        <type>VI</type>
        <number>4100200300011001</number>
        <expDate>0421</expDate>
      </card>
      <response>803</response>
      <message>Valid Token</message>
      <responseTime>2018-01-06T16:40:30</responseTime>
    </translateToAccountNumberResponse>
    <translateToAccountNumberResponse id="translate2" reportGroup="abcde">
      <orderId>12345654322</orderId>
      <card>
        <type>MC</type>
        <number>5112010000000003</number>
        <expDate>0421</expDate>
      </card>
      <response>803</response>
      <message>Valid Token</message>
      <responseTime>2018-01-06T16:40:32</responseTime>
    </translateToAccountNumberResponse>
  </batchResponse>
</batchAccountNumberAccessResponse>

```

Testing Account Number Access Transactions

You can use the following test scenarios to verify your coding of the `onlineAccountNumberAccessRequest`, as well as various responses. Before you begin, you must contact your Implementation Consultant and arrange for them to create a new Token Translator presenter in the Pre-Live environment. After creation, your Implementation Consultant provides you credentials/Paypage ID.

To test this transaction type, please do the following:

- 1. Navigate to the following web page:
<https://www.testvantivcnp.com/checkout/eProtect/validation/prelive/eProtect3.html>
- 2. In the Test Input Fields section (see Figure 1), enter your assigned Paypage ID. You can change the other fields as desired, or leave the default values.

FIGURE 1 Test Input Fields Section

Test Input Fields

Enter your Paypage ID here.

Paypage ID	<input type="text" value="a2y4o6m8k0"/>	Merchant Txn ID	<input type="text" value="12345"/>
Order ID	<input type="text" value="cust_order"/>	Report Group	<input type="text" value="67890"/>
JS Timeout	<input type="text" value="5000"/>		

- 3. In the Checkout Form section, enter a valid test credit card number, as shown in Figure 2 and click the **Check out** button.

FIGURE 2 Checkout form Section

Checkout Form

Enter a test card number here.

Credit Card	<input type="text"/>	
Paypage Registration ID	<input type="text"/>	<--Hidden
Bin	<input type="text"/>	<--Hidden

- 4. Copy the generated Paypage Registration ID value from the field of the same name for use in your `<translateToAccountNumberRequest>` transaction.
- 5. Submit a `<translateToAccountNumberRequest>` transaction using the PayPage Registration ID obtained in Step 4. Verify the PAN information returned matches the information for the PAN used to create the PayPage Registration ID.

cnpAPI Elements

This section provides definitions of the elements specific to the transactions used to redeem a low value token for PAN information.

authentication

The `authentication` element is a required element of both the `onlineAccountNumberAccessRequest` and the `batchAccountNumberAccessRequest` elements. It contains child elements used to authenticate that the request message originated from a valid user.

Parent Elements:

[onlineAccountNumberAccessRequest](#), [batchAccountNumberAccessRequest](#)

Attributes:

None

Child Elements:

Required: [user](#), [password](#)

Example: authentication Structure

```
<authentication>
  <user>User Name</user>
  <password>Password</password>
</authentication>
```

batchAccountNumberAccessRequest

The `batchAccountNumberAccessRequest` element is the root element for Account Number Access Request batches. You use this transaction type to exchange batches of merchant provided low value tokens for PAN information.

Parent Elements:

N/A

Attributes:

Attribute Name	Type	Required?	Description
version	String	Yes	Defines the cnpAPI schema version against which the system validates the XML. minLength = N/A maxLength = 10

Attribute Name	Type	Required?	Description
xmlns	String	Yes	Defines the URI of the schema definition. This is a fixed location specified as: http://www.vantivcnp.com/schema . minLength = N/A maxLength = 38
numBatchRequests	Integer	Yes	A count of the number of <code>batchRequest</code> in this session. Max totalDigits = 10

Child Elements:

Required: [authentication](#), [batchRequest](#)

batchAccountNumberAccessResponse

The `batchAccountNumberAccessResponse` element is the parent element for the response to `batchAccountNumberAccessRequest` requests.

Parent Elements:

N/A

Attributes:

Attribute Name	Type	Required?	Description
version	String	Yes	Defines the API schema version against which the system validates the XML. minLength = N/A maxLength = 10
xmlns	String	Yes	Defines the URI of the schema definition. This is a fixed location specified as: http://www.vantivcnp.com/schema . minLength = N/A maxLength = 38
id	String	No	The response returns the same value submitted in the request. minLength = N/A maxLength = 25

Attribute Name	Type	Required?	Description
response	String	Yes	<p>Indicates whether your XML syntax passed validation. Expected values are as follows:</p> <p>0 - XML validation succeeded.</p> <p>1 - XML validation failed. See the message attribute for more details.</p> <p>2 - Indicates that the submitted content was either improperly formatted XML or non-XML content.</p> <p>3 - Indicates that the submission contains empty or invalid credentials (user and password).</p> <p>4 - Indicates that the merchant has reached the maximum number of concurrent connections.</p> <p>5 - Indicates that systems may have detected message content that violates certain restrictions.</p> <p>minLength = N/A maxLength = 3</p>
message	String	Yes	<p>XML validation error message. Expected values are as follows:</p> <ul style="list-style-type: none"> • If the response attribute returns 0, the message attribute returns the text "Valid Format." • If the response attribute returns 1, the message attribute returns an error message that helps you to identify and troubleshoot the syntax problem. See XML Validation Error Messages on page 850 of the <i>cnpAPI Reference Guide</i> for example messages. • If the response attribute returns 2, the message attribute is "System Error - Call Vantiv" • If the response attribute returns a value of 3, 4, or 5, the message attribute is "There is a problem with the system. Contact eCommerceSupport@vantiv.com." <p>minLength = N/A maxLength = 512</p>
cnpSessionId	Long	Yes	<p>A unique value assigned by Worldpay to identify the session.</p> <p>minLength = N/A maxLength = 19</p>

Child Elements:All Required: [batchResponse](#)**batchRequest**

This is the parent element for all Account Number Access Request batch requests.

Parent Elements:[batchAccountNumberAccessRequest](#)**Attributes:**

Attribute Name	Type	Required?	Description
id	String	No	A unique string to identify this <code>batchRequest</code> within the system. minLength = N/A maxLength = 50
numTranslateToAccountNumberRequests	Integer	No	The number of <code>translateToAccountNumberRequest</code> transactions included in the batch. Max totalDigits = 10
merchantId	String	Yes	A unique string to identify the merchant within the system. minLength = N/A maxLength = 50 Note: International currencies are supported on a per merchantId basis.

Child Elements:Required: [translateToAccountNumberRequest](#)**batchResponse**

The `batchResponse` element is the parent element for information returned to you in response to a batch you submitted for processing. It is a child of a `batchAccountNumberAccessResponse` element.

Parent Elements:[batchAccountNumberAccessResponse](#)**Attributes:**

Attribute Name	Type	Required?	Description
id	String	No	The response returns the same value submitted in the Batch Request. minLength = N/A maxLength = 36
cnpBatchId	Long	Yes	A unique value assigned by Worldpay to identify the batch. minLength = N/A maxLength = 19

Attribute Name	Type	Required?	Description
merchantId	String	Yes	The response returns the same value submitted in the Batch Request. minLength = 1 maxLength = 50

Child Elements:Required: [translateToAccountNumberResponse](#)**card**

The `card` element defines payment card information associated with the submitted low value token. It is an optional child of the `translateToAccountNumberResponse` element. It is always present, for successful transactions and never present for failed transactions. The system never returns the `cardValidationNum` element.

Parent Elements:[translateToAccountNumberResponse](#)**Attributes:**

None

Child Elements:[type](#), [number](#), [expDate](#), [cardValidationNumber](#) (never returned)**Example: card Structure**

```
<card>
  <type>Card Type Abbreviation</type>
  <number>Account Number</number>
  <expDate>Expiration Date</expDate>
</card>
```

cardValidationNumber

The `cardValidationNum` element is an optional child of the `card` element, which provides the CVV2 (Visa), CVC2 (MasterCard), or CID (American Express and Discover) value.

NOTE:NOTE:The system never returns the `cardValidationNum` value in the response file.

Type = String; **minLength** = N/A; **maxLength** = 4

Parent Elements:[card](#)**Attributes:**

None

Child Elements:

None

expDate

The `expDate` element is a child of the `card` elements, which specifies the expiration date of the card (format: `mmyy`). The system returns his value if present in our database and the translate succeeds.

Type = String; **minLength** = 4; **maxLength** = 4

Parent Elements:[card](#)**Attributes:**

None

Child Elements:

None

message

The `message` element contains a brief definition of the response code returned for the transaction. The table below is a list of the possible response codes (`response` element) and messages for a `translateToAccountNumberResponse` message.

Response (code)	Message
803	Valid Token
821	Merchant is not authorized for tokens
822	Token was not found

Type = String; **minLength** = N/A; **maxLength** = 512

Parent Elements:[translateToAccountNumberResponse](#)

Attributes:

None

Child Elements:

None

number

The `number` element defines the account number associated with the submitted low value token.

Type = String; **minLength** = 13; **maxLength** = 25

Parent Elements:[card](#)**Attributes:**

None

Child Elements:

None

onlineAccountNumberAccessRequest

The `onlineAccountNumberAccessRequest` element is the parent element for Account Number Access Request transactions. You use this transaction type to exchange a merchant provided low value token for PAN information.

Parent Elements:

N/A

Attributes:

Attribute Name	Type	Required?	Description
version	String	Yes	Defines the <code>cnpAPI</code> schema version against which the system validates the XML. minLength = N/A maxLength = 10
xmlns	String	Yes	Defines the URI of the schema definition. This is a fixed location specified as: <code>http://www.vantivcnp.com/schema</code> . minLength = N/A maxLength = 38
merchantId	String	Yes	A unique string used to identify the merchant within the system. minLength = N/A maxLength = 50

Attribute Name	Type	Required?	Description
loggedInUser	String	No	Internal Use Only
sameDayFunding	Boolean	No	Not used for this function. Applies only to PayFac Dynamic Funding.

Child Elements:

Required: [authentication](#), [translateToAccountNumberRequest](#)

onlineAccountNumberAccessResponse

The `onlineAccountNumberAccessResponse` element is the parent element for the response to `onlineAccountNumberAccessRequest` requests.

Parent Elements:

N/A

Attributes:

Attribute Name	Type	Required?	Description
version	String	Yes	Defines the schema version against which the system validates the XML. minLength = N/A maxLength = 10
xmlns	String	Yes	Defines the URI of the schema definition. This is a fixed location specified as: http://www.vantivcnp.com/schema . minLength = N/A maxLength = 38
response	String	Yes	Indicates whether your XML syntax passed validation. Possible values are as follows: 0 - XML validation succeeded. 1 - XML validation failed. See the message attribute for more details. 2 - Indicates that the submitted content was either improperly formatted XML or non-XML content. 3 - Indicates that the submission contains empty or invalid credentials (user and password). 4 - Indicates that the merchant has reached the maximum number of concurrent connections. 5 - Indicates that systems may have detected message content that violates certain restrictions. minLength = N/A maxLength = 3

Child Elements:

All Required: [translateToAccountNumberResponse](#)

orderId

The `orderId` element is an optional child of the `onlineAccountNumberAccessRequest` and defines a submitter-assigned value representing the order in the submitter's system.

Type = String; **minLength** = N/A; **maxLength** = 25

Parent Elements:

[translateToAccountNumberRequest](#)

Attributes:

None

Child Elements:

None

password

The `password` element is a required child of the `authentication` element. The system uses it in combination with the `user` element to authenticate that the message is from a valid source.

Type = String; **minLength** = N/A; **maxLength** = 20

Parent Elements:

[authentication](#)

Attributes:

None

Child Elements:

None

paypageRegistrationId

The `paypageRegistrationId` element is the low value token you submit when requesting the associated PAN information.

Type = String; **minLength** = N/A; **maxLength** = 512

Parent Elements:[translateToAccountNumberRequest](#)**Attributes:**

None

Child Elements:

None

response

The `response` element contains a three digit numeric code which specifies information about the transaction results (approved or reason for decline). The `message` element provides a brief definition of the response code. Possible values for the response element in a `translateToAccountNumberResponse` are listed below.

Response (code)	Message
803	Valid Token
821	Merchant is not authorized for tokens
822	Token was not found

Type = String; **minLength** = N/A; **maxLength** = 3

Parent Elements:[translateToAccountNumberResponse](#)**Attributes:**

None

Child Elements:

None

responseTime

The `responseTime` element provides a date/time stamp of the response. The format of the element is YYYY-MM-DDTHH:MM:SS. For example, 2018-01-21T11:37:04.

Type = dateTime; **minLength** = N/A; **maxLength** = 19

Parent Elements:[translateToAccountNumberResponse](#)

Attributes:

None

Child Elements:

None

translateToAccountNumberRequest

The `translateToAccountNumberRequest` element is the parent element for the transaction used to exchange a merchant provided low value token for PAN information.

Parent Elements:

[onlineAccountNumberAccessRequest](#), [batchRequest](#)

Attributes:

Attribute Name	Type	Required?	Description
id	String	Yes	A unique identifier assigned by the presenter and mirrored back in the response. minLength = N/A maxLength = 25
customerId	String	No	A value assigned by the merchant to identify the consumer. minLength = N/A maxLength = 50
reportGroup	String	Yes	Required attribute defining the merchant sub-group in the user interface where this transaction displays. minLength = 1 maxLength = 25

Child Elements:

Required: [paypageRegistrationId](#)

Optional: [orderId](#)

translateToAccountNumberResponse

The `translateToAccountNumberResponse` element is the parent element for information returned to you in response to a `translateToAccountNumberRequest` transaction.

Parent Elements:

[onlineAccountNumberAccessResponse](#), [batchResponse](#)

Attributes:

Attribute Name	Type	Required?	Description
id	String	Yes	The response returns the same value submitted in the Authorization transaction. minLength = 1 maxLength = 36
customerId	String	No	The response returns the same value submitted in the Authorization transaction. minLength = N/A maxLength = 50
reportGroup	String	Yes	The response returns the same value submitted in the Authorization transaction. minLength = 1 maxLength = 25

Child Elements:

Required: [orderId](#), [response](#), [responseTime](#), [message](#)

Optional: [card](#) (Always returned, when request approved)

type

This `type` element defines the type of card in terms of card association, or card company.

Type = String (Enum); **minLength** = N/A; **maxLength** = 2

Parent Elements:

[card](#)

Attributes:

None

Child Elements:

None

Enumerations:

Enumeration	Description
MC	MasterCard
VI	Visa
AX	American Express
DC	Diner's Club

Enumeration	Description
DI	Discover
PP	PayPal
JC	JCB (Japanese Credit Bureau)
EC	eCheck
GC	Gift Card
"" (empty)	Card type unknown or undefined

user

The `user` element is a required child of the `authentication` element. It is a unique identifier of the submitter used to authenticate that the message originated from a valid source.

Type = String; **minLength** = N/A; **maxLength** = 20

Parent Elements:

[authentication](#)

Attributes:

None

Child Elements:

None