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Preface

This document describes recurring payments using reference transactions.

**Intended Audience**

This document is intended for merchants implementing the PayPal account authentication service, which supports store account login. Typically, the merchant will understand web development or have access to those resources.

**Revision History**

Revision history for *Account Authentication Service API Reference*.

*TABLE P.1 Revision History*

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/30/09</td>
<td>Added additional information about obtaining the name and email address.</td>
</tr>
<tr>
<td>10/30/07</td>
<td>First draft.</td>
</tr>
</tbody>
</table>
About the Account Authentication Service

Describes the account authentication service and the APIs and commands to integrate the service.

Account Authentication Service Overview

Briefly describes the purpose, features, and architecture of the account authentication service. The account authentication service enables your web site to verify the authenticity of your customers. You can use this service to provide secure login to your site and leverage PayPal’s database of many millions of accounts. Your customer can log in with confidence that their financial information is protected and you can reduce the amount of effort required to provide a secure service.

PayPal provides you with the information needed to track the customer on your site. If your customer does not have an account with you, the information provided by PayPal will be sufficient to identify and interact with the customer. If your customer does not have a PayPal account, you can pre-populate information to make it easy to create a PayPal account and continue their relationship with you.

You can use the account authentication service whether or not your customer chooses to pay with PayPal. If your customer decides to pay with PayPal, the number of steps to complete an order will be further reduced, streamlining the transaction and increasing order completion rate.

Account Authentication Benefit Summary

Identifies the benefits of using the account authentication service.

The benefits to your customers of the account authentication service are as follows:

- Customer logs in to your site with the confidence and security of logging into PayPal
- A PayPal account holder logs in to your site without needing to provide additional information
- Because PayPal is widely used, the customer is more likely to remember his or her username and password

The benefits to you as a merchant are as follows:

- You can implement secure login with only two API calls; login occurs on paypal.com
- Both PayPal and non-PayPal payment options are supported without changing your site
You need not provide or maintain a separate site-specific signup process
You reduce your risk by reducing the amount of customer information that you must keep secure
PayPal checkout flows are streamlined, increasing conversion
You gain the trust associated with PayPal in handling a customer’s financial information
Password reset is provided automatically as part of the login process

Account Authentication Service Architecture

Describes the parts of the account authentication service.
The account authentication service consists of two APIs and two commands. You call the following APIs:

<table>
<thead>
<tr>
<th>API</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetAuthDetails</td>
<td>Retrieves details about the account being authenticated</td>
</tr>
<tr>
<td>SetAuthFlowParam</td>
<td>Sets parameters used by account authentication flow</td>
</tr>
</tbody>
</table>

You redirect to PayPal to execute the following commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>_account-authenticate-login</td>
<td>Invokes PayPal authentication login or signup flows</td>
</tr>
<tr>
<td>_account-authenticate-logout</td>
<td>Invokes PayPal authentication logout flow</td>
</tr>
</tbody>
</table>

The following steps show the order in which you call the APIs and execute the commands to authenticate an account:

1. Call the SetAuthFlowParam API to set up the flow and obtain a unique token.
2. Redirect to paypal.com using the _account-authenticate-login command and the token to allow the customer to login or sign up.
3. Call the GetAuthDetails API with the token to obtain information about the customer for tracking and communication purposes.

   After successful completion of this step, you can allow your customer to perform all operations that require security, including the placement of an order.

   **IMPORTANT:** Authentication is complete only after successful completion of this step.

4. Redirect to paypal.com using the _account-authenticate-logout command to log the customer off of your site if requested.
Data Shared by the Account Authentication Service

Describes the data shared by PayPal with a merchant.

As a merchant, you need not share any data with PayPal. Upon successful authentication, PayPal provides you with the customer’s Payer ID, which uniquely identifies the customer. You can use the Payer ID to track the customer on your site.

When you call the SetAuthFlowParam API, you can request that the customer approve sending you additional information:

- Customer first and last name
- Customer email address

By logging into PayPal, your customer approves the release of the required information. You can choose to request partial information or none at all if the Payer ID is sufficient.

Account Login for Authentication

Shows the account login user interface for authentication.

Use the account login user interface to emphasize login over signup; this is the default login page. The login screen appears when you redirect to paypal.com using the _account-authenticate-login command:

The text above the Agree and Login button changes to reflect your request for required information.
Account Sign Up for Authentication

Shows the PayPal account sign up user interface.

Use the account sign up user interface to easily allow a new customer to create a PayPal account for account authentication. The signup screen appears when you redirect to paypal.com using the _account-authenticate-login command after calling the SetAuthFlowParam API with the INITFLOWTYPE field set to Signup:

The text above the **Agree and Login** button changes to reflect your request for required information.
Integrating the Account Authentication Service

Describes how to implement the account authentication service using the PayPal NVP interface.

The following diagram shows the account authentication service flow. The pages on the left represent your site.

The following steps match the circled numbers in the diagram. Implement these steps to integrate the account authentication service with your site.

1. Specify values for the fields with which to invoke the account authentication service flow and invoke the SetAuthFlowParm API.

You must set the following fields:
You can also set fields to customize your PayPal pages. To invoke the signup flow, you must set the `INITFLOWTYPE` to `Signup`. You can set additional fields to pre-populate the customer’s name and address as well.

The following example shows how to set the required fields for the `SetAuthFlowParm` API, as well as how to set fields required to retrieve the name and email later using the `GetAuthDetails` API, and post it as form:

```
<form method=post action=https://api-3tpaypal.com/nvp>
    <input type=hidden name=USER value=API_username>
    <input type=hidden name=PWD value=API_password>
    <input type=hidden name=SIGNATURE value=API_signature>
    <input type=hidden name=VERSION value=version>
    <input type=hidden name=RETURNURL value=yourReturnURL>
    <input type=hidden name=CANCELURL value=yourCancelURL>
    <input type=hidden name=LOGOUTURL value=yourLogoutURL>
    <input name=SERVICENAME1 value=Name>
    <input name=SERVICEDEFREQ1 value=Required>
    <input name=SERVICEDEFREQ2 value=Email>
    <input type=submit name=METHOD value=SetAuthFlowParam>
</form>
```

PayPal responds with a message, such as the one shown below.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| RETURNURL   | URL to which the customer’s browser is returned after choosing to authenticate with PayPal.  
**NOTE:** Consider setting this URL to the next page in your flow; for example, if you require authentication to check order status, the return URL might specify your order status page.  
Character length and limitations: no limit. |
| CANCELURL   | URL to which the customer is returned if he or she does not log in.   
**NOTE:** Consider setting this URL to the current page so that the customer is returned to the page he or she was on before being redirected to the login page.  
Character length and limitations: no limit. |
| LOGOUTURL   | URL to which the customer is returned on logout from your site.  
**NOTE:** Consider setting this URL to your home page so that the customer is redirected to your home page after logging out.  
Character length and limitations: no limit. |
The status returned in the **ACK** field set should be set to **Success**. The token is used in the steps that follow.

2. If the operation was successful, set the following parameters and redirect your browser to PayPal:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>cmd</strong></td>
<td>_account-authenticate-login</td>
</tr>
<tr>
<td><strong>token</strong></td>
<td>Token contained in the SetAuthFlowParam API response.</td>
</tr>
</tbody>
</table>

**NOTE:** You may need to replace hexadecimal codes with ASCII codes; for example, you may need to replace `%2d` in the token with a hyphen (`-`).

The following example shows how to redirect to PayPal using the specified command:

```
https://www.sandbox.paypal.com/cgi-bin/webscr?cmd=_account-authenticate-login&TOKEN=HA-1NK66318YB717835M
```

If the customer successfully logs in, the customer’s browser is redirected to the page specified by the **RETURNURL** field in the SetAuthFlowParam API. If the customer clicks the **Return to merchant** link, the customer’s browser is redirected to the page specified by the **CANCELURL** field; otherwise, the customer stays on the login page.

3. From your return URL page, invoke the GetAuthDetails API with the token from the SetAuthFlowParm API response.

The following example shows how to set the required fields for the GetAuthDetails API and post it as form:

```
<form method=post action=https://api-3t.sandbox.paypal.com/nvp>
  <input type=hidden name=USER value=API_username>
  <input type=hidden name=PWD value=API_password>
  <input type=hidden name=SIGNATURE value=API_signature>
  <input type=hidden name=VERSION value=version>
  <input type=hidden name=TOKEN value=HA-1NK66318YB717835M>
  <input type=submit name=METHOD value=GetAuthDetails>
</form>
```

PayPal responds with a message such as the one shown below, which includes a status code.
TIMESTAMP=2007%2d10%2d22T20%3a29%3a01Z
&CORRELATIONID=e03800e3c8c32
&ACK=Success
&VERSION=3%2e000000
&PAYERID=PayerID
&FIRSTNAME=FirstName
&LASTNAME=LastName
&EMAIL=username%40domain%2esuffix

**IMPORTANT:** The status returned in the **ACK** field must be **Success**. If the operation is not successful, the customer has not been authenticated.

If the operation is successful, the message also includes the required information about the customer, such as the name and e-mail address.

4. When authentication is no longer required, set the following parameters and redirect your browser to PayPal:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cmd</td>
<td>_account-authenticate/logout</td>
</tr>
<tr>
<td>token</td>
<td>Token contained in the SetAuthFlowParam response.</td>
</tr>
</tbody>
</table>

**NOTE:** You may need to replace hexadecimal codes with ASCII codes; for example, you may need to replace `%2d` in the token with a hyphen (-).

The following example shows how to redirect to PayPal using the specified command:

https://www.sandbox.paypal.com/cgi-bin/webscr?cmd=_account-authenticate/logout&TOKEN=HA-1NK66318YB717835M

When the customer logs out, the customer’s browser is redirected to the page specified by the **LOGOUTURL** field in the SetAuthFlowParam API. If the customer cancels, the customer’s browser is redirected to the page specified by the **CANCELURL** field.
Identifies APIs and commands for the account authentication service.

### Authentication APIs

Identifies Authentication APIs.

<table>
<thead>
<tr>
<th>API</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetAuthDetails</td>
<td>Retrieves details about the account being authenticated</td>
</tr>
<tr>
<td>SetAuthFlowParam</td>
<td>Sets parameters used by account authentication flow</td>
</tr>
</tbody>
</table>

### GetAuthDetails API

Identifies GetAuthDetails API fields.

#### GetAuthDetails Summary

The following diagram shows the request and response fields for the GetAuthDetails API:

GetAuthDetails Request Fields

Identifies request fields for the GetAuthDetails API.
### GetAuthDetails Response Fields

Identifies response fields for the GetAuthDetails API

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOKEN</td>
<td>A timestamped token, the value of which was returned in the SetAuthFlowParam response. Character length and limitations: 20 single-byte characters</td>
</tr>
<tr>
<td>PAYERID</td>
<td>The Payer ID of the authenticated customer. Character length and limitations: 13 single-byte alphanumeric characters</td>
</tr>
<tr>
<td>EMAIL</td>
<td>The email address of the authenticated customer. <strong>NOTE:</strong> To retrieve this information, you must specify Required in the SERVICEDEFREQ field corresponding to SERVICENAME = Email in the SetAuthFlowParm API operation. Character length and limitations: 127 single-byte characters</td>
</tr>
<tr>
<td>FIRSTNAME</td>
<td>The first name of the authenticated customer. <strong>NOTE:</strong> To retrieve this information, you must specify Required in the SERVICEDEFREQ field corresponding to SERVICENAME = Name in the SetAuthFlowParm API operation. Character length and limitations: 25 single-byte characters</td>
</tr>
<tr>
<td>LASTNAME</td>
<td>The last name of the authenticated customer. <strong>NOTE:</strong> To retrieve this information, you must specify Required in the SERVICEDEFREQ field corresponding to SERVICENAME = Name in the SetAuthFlowParm API operation. Character length and limitations: 25 single-byte characters</td>
</tr>
</tbody>
</table>

### GetAuthDetails Return Codes

Identifies errors and messages for the GetAuthDetails API.

<table>
<thead>
<tr>
<th>Code</th>
<th>Short Message</th>
<th>Long Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>10062</td>
<td>The Token has Expired</td>
<td>The Token has Expired. For a new token make the API call again</td>
</tr>
<tr>
<td>10063</td>
<td>The Token is Invalid</td>
<td>The Token is Invalid. For a valid token make the API call again</td>
</tr>
</tbody>
</table>
SetAuthFlowParam API

Identifies fields for the SetAuthFlowParam API.

SetAuthFlowParm Summary

The following diagram shows the request and response fields for the SetAuthFlowParam API.

SetAuthFlowParam Request Fields

Identifies request fields for the SetAuthFlowParam API.
### Required Fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| RETURNURL     | URL to which the customer’s browser is returned after choosing to authenticate with PayPal.  
**NOTE:** Consider setting this URL to the next page in your flow; for example, if you require authentication to check order status, the return URL might specify your order status page.  
Character length and limitations: no limit. |
| CANCELURL     | URL to which the customer is returned if he or she does not log in.  
**NOTE:** Consider setting this URL to the current page so that the customer is returned to the page he or she was on before being redirected to the login page.  
Character length and limitations: no limit |
| LOGOUTURL     | URL to which the customer is returned on logout from your site.  
**NOTE:** Consider setting this URL to your home page so that the customer is redirected to your home page after logging out.  
Character length and limitations: no limit |

### Optional Fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| LOCALECODE  | Locale of pages displayed by PayPal during authentication.  
Character length and limitations: Any two-character country code.  
The following two-character country codes are supported by PayPal:  
- AU  
- DE  
- FR  
- IT  
- GB  
- ES  
- US  
Any other value will default to US. |
| PAGESTYLE   | Sets the Custom Payment Page Style of PayPal pages associated with this button/link. This value corresponds to the HTML variable page_style for customizing payment pages. The value is the same as the Page Style Name you chose when adding or editing the page style from the Profile subtab of the My Account tab of your PayPal account.  
Character length and limitations: 30 single-byte alphabetic characters. |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDRIMG</td>
<td>URL for the image you want to appear at the top left of PayPal pages. The image has a maximum size of 750 pixels wide by 90 pixels high. PayPal recommends that you provide an image that is stored on a secure (https) server. Character length and limit: 127 single-byte alphanumeric characters</td>
</tr>
<tr>
<td>HDRBORDERCOLOR</td>
<td>Sets the border color around the header on PayPal pages. The border is a 2-pixel perimeter around the header space, which is 750 pixels wide by 90 pixels high. Character length and limitation: Six character HTML hexadecimal color code in ASCII</td>
</tr>
<tr>
<td>HDRBACKCOLOR</td>
<td>Sets the background color for the header on PayPal pages. Character length and limitation: Six character HTML hexadecimal color code in ASCII</td>
</tr>
<tr>
<td>PAYFLOWCOLOR</td>
<td>Sets the background color for the payment page. Character length and limitation: Six character HTML hexadecimal color code in ASCII</td>
</tr>
</tbody>
</table>
| INITFLOWTYPE     | The initial flow, which is one of the following values:  
  - login specifies the login flow  
  - signup specifies the sign-up flow  
  If not specified, the default is login. |
| SERVICENAMEn     | A value to be returned, where n equal to 1 specifies the first value and n equal to 2 specifies the next value, and so on. Allowable values are  
  - Name specifies returning the first name and last name fields  
  - Email specifies returning the email address |
| SERVICEDEFREQn   | Whether the value specified by service name is required or optional, where n equal to 1 specifies the first value and n equal to 2 specifies the next value, and so on. Choices are  
  - Required specifies that the value must be returned  
  - Optional specifies that the value is not required  
  **NOTE:** You must specify Required if you want to retrieve the information using GetAuthDetails. |
| FIRSTNAME        | Customer’s first name. Character length and limitations: 25 single-byte characters |
| LASTNAME         | Customer’s last name. Character length and limitations: 25 single-byte characters |
## SetAuthFlowParam Response Fields
Identifies response fields SetAuthFlowParam API

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHIPTONAME</td>
<td>Person’s name associated with this address. Character length and limitations: 32 single-byte characters.</td>
</tr>
<tr>
<td>SHIPTOSTREET</td>
<td>First street address. Character length and limitations: 100 single-byte characters.</td>
</tr>
<tr>
<td>SHIPTOSTREET2</td>
<td>Second street address. Character length and limitations: 100 single-byte characters.</td>
</tr>
<tr>
<td>SHIPTOCITY</td>
<td>Name of city. Character length and limitations: 40 single-byte characters.</td>
</tr>
<tr>
<td>SHIPTOSTATE</td>
<td>State or province. Character length and limitations: 40 single-byte characters. Required for U.S. addresses only.</td>
</tr>
<tr>
<td>SHIPTOZIP</td>
<td>U.S. ZIP code or other country-specific postal code. Character length and limitations: 20 single-byte characters.</td>
</tr>
<tr>
<td>SHIPTOCOUNTRYCODE</td>
<td>Country code. Character limit: Two single-byte characters.</td>
</tr>
</tbody>
</table>

## SetAuthParam Return Codes
Identifies error and message codes for the SetAuthParam API.

<table>
<thead>
<tr>
<th>Code</th>
<th>Short Message</th>
<th>Long Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>10002</td>
<td>Authentication/Authorization Failed</td>
<td>Username/Password is incorrect</td>
</tr>
<tr>
<td>10055</td>
<td>This account is not approved for the authentication service</td>
<td>This account is not approved for the authentication service. To enable this service, contact PayPal customer service.</td>
</tr>
</tbody>
</table>
Identifies account authentication service commands.

<table>
<thead>
<tr>
<th>Code</th>
<th>Short Message</th>
<th>Long Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>10056</td>
<td>Transaction refused because of an invalid argument.</td>
<td>The Return URL parameter is missing. Please provide a valid URL.</td>
</tr>
<tr>
<td>10057</td>
<td>Transaction refused because of an invalid argument.</td>
<td>The Cancel URL parameter is missing. Please provide a valid URL.</td>
</tr>
<tr>
<td>10058</td>
<td>Transaction refused because of an invalid argument.</td>
<td>The Logout URL parameter is missing. Please provide a valid URL.</td>
</tr>
<tr>
<td>10059</td>
<td>Transaction refused because of an invalid argument.</td>
<td>The Return URL parameter is missing. Please provide a valid URL.</td>
</tr>
<tr>
<td>10061</td>
<td>Transaction refused because of an invalid argument.</td>
<td>The Cancel URL parameter is missing. Please provide a valid URL.</td>
</tr>
<tr>
<td>10062</td>
<td>Transaction refused because of an invalid argument.</td>
<td>The Logout URL parameter is missing. Please provide a valid URL.</td>
</tr>
</tbody>
</table>

**Authentication Commands**

Identifies account authentication service commands.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>_account-authenticate-login</td>
<td>Invokes PayPal authentication login or signup flows</td>
</tr>
<tr>
<td>_account-authenticate-logout</td>
<td>Invokes PayPal authentication logout flow</td>
</tr>
</tbody>
</table>

**_account-authenticate-login Command**

Describes the login command for the account authentication service.

**Redirect to PayPal using the _account-authenticate-login command**

https://www.paypal.com/cgi-bin/webscr?cmd=_account-authenticate-login&token=value
Account Authentication Service Reference

Authentication Commands

Response to _account-authenticate-login command from PayPal

url

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cmd</td>
<td>_account-authenticate-login</td>
</tr>
<tr>
<td>token</td>
<td>Token contained in the SetAuthFlowParam API response.</td>
</tr>
</tbody>
</table>

_acount-authenticate-logout Command

Describes the logout command for the account authentication service

Redirect to PayPal using the _account-authenticate-logout command


<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cmd</td>
<td>_account-authenticate-logout</td>
</tr>
<tr>
<td>token</td>
<td>Token contained in the SetAuthFlowParam response.</td>
</tr>
</tbody>
</table>

Response to _account-authenticate-logout command from PayPal

logoutURL

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logoutURL</td>
<td>Logout URL set in the SetAuthFlowParam request.</td>
</tr>
</tbody>
</table>