Authentecheck™
INTEGRATION GUIDE

September 2023
VERSION 4.2 (Plaid)

Table of Contents

Version History:

3.2: 01/03/2023   1) Changed order of "Basic HTML Sample Code for Consumer
Interface" and "Table 1: Initiate Authentecheck UI module"

3.3: 02/24/2023   1) Removed iFrame requirement
2) Added repeat user flow.

4.0: 04/09/2023   1) Report the masked actual account number in the authdata JSON block in the merchant postback (*display_acct* field within authdata)
2) Added option for user identity pull (*identity* field)

4.1: 04/26/2023   1) Updated responses in *curr_bill_status* within Status API Call.
2) Edit to repeat user flow (bypass Plaid)
3) Edit to repeat user flow (bypass Plaid) – designate same-day transactions
4) Added processing cutoff times.

4.2: 09/12/2023   1) Added field *balance_refresh* for Repeat User Flow. This option will force a balance refresh from Plaid if the default balance refresh time hasn't expired yet.

# Authent*e*check^{TM} Integration Guide

Authent*e*check^{TM} is an alternate way of accepting ACH payments online where users enter their personal banking login credentials in order to capture their routing and account numbers, which we pull directly from the financial institution's site, along with other data, such as the current and/or available balance, transaction history, and contact information.

Payment Acceptance Flow

STAGES	PROCESS	DESCRIPTION
1	**User Checkout**	The user is on the merchant's website and selects to Pay by Online Bank Transfer. The transaction request redirects the user to Authentecheck.
2	**Module Load**	The transaction request is validated to generate the Authent*e*check^{TM} UI Module, where the online banking widget loads.
3	**Account Verification**	The user selects their financial institution, authenticates their identity, and selects an account. This initiates an online banking session via API.
4	**Dataset Validation**	The account information in the dataset retrieved from the user's financial institution is validated against Authent*e*check^{TM} processing rules.
5	**Transaction Processing**	The transaction request is submitted for processing and validated against merchant- specific processing rules. The transaction request is accepted or declined.
6A	**Transaction Accepted**	The Authent*e*check^{TM} UI Module is redirected to the "Accepted" page. A payload with transaction processing details is separately delivered to the merchant's configured postback URL.
6B	**Transaction Declined**	The Authent*e*check^{TM} UI Module is redirected to the "Declined" page. Transaction processing details are appended to the redirect URL. No further information is provided.

User Interface Module

The Authent*e*check™ user interface module will automatically load after the user is redirected from the merchant's checkout page. Using an iframe to embed the module within the merchant checkout page is highly discouraged.
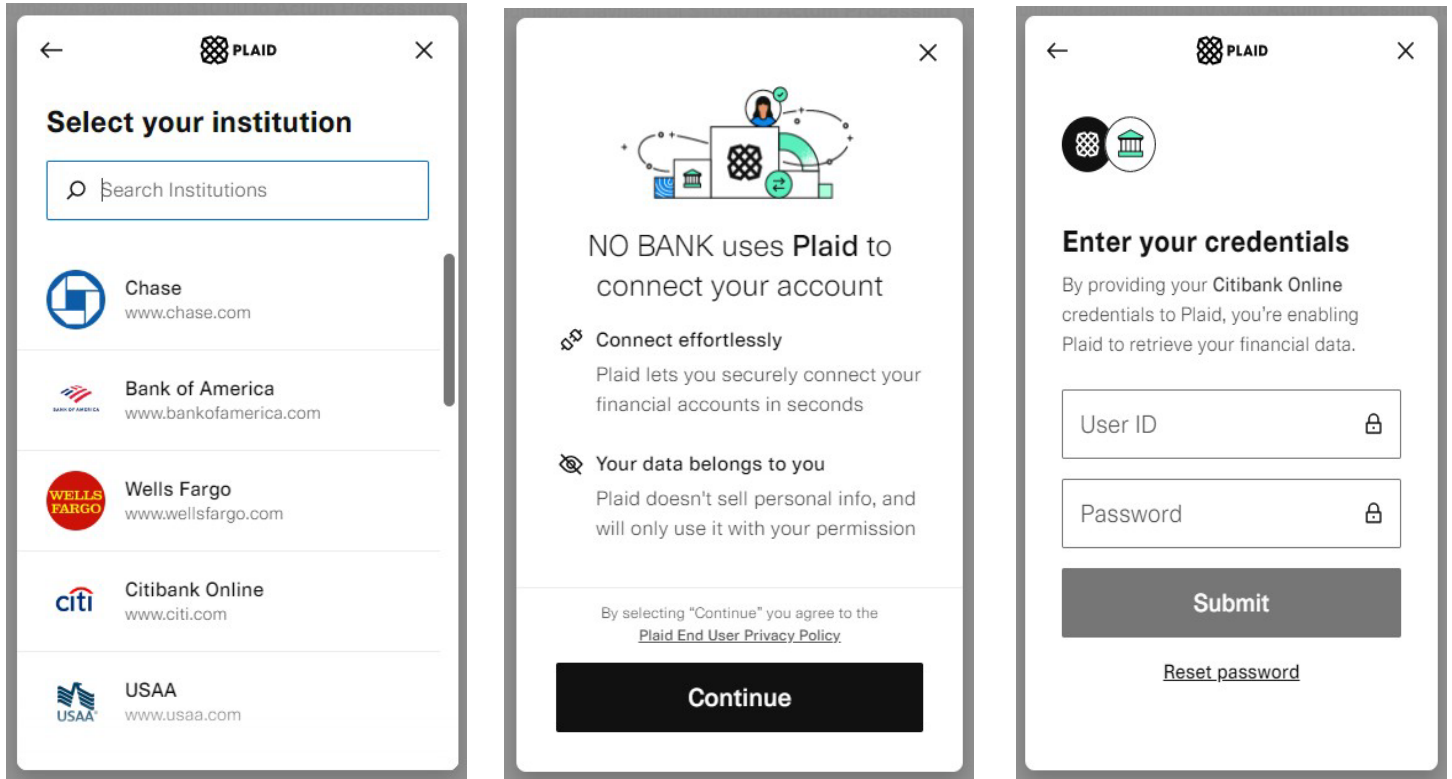
Initiating the Secure Payment Session

To prevent user manipulation of data in the source URL, the following parameters will be used to create the secure session ID that will be presented to the consumer during the purchase.

Request Method: POST
URL Endpoint: https://join.actumprocessing.com/Signup/SignupInit.cgi

Table 1: Initiate Authentecheck Module			
FIELD NAME	**REQUIREMENT**	**TYPE**	**DESCRIPTION**
merchantdata	optional	VARCHAR2(512)	Internal unique identifier. This data will be sent back in the "redirect" URL string and in the "postback" data.
ps1_init[1]	required	XX.XX ex. 29.99	Initial amount of the transaction.
ps1_desc	required	VARCHAR2(50)	Item description
firstname	required	VARCHAR2(30)	First name of consumer
lastname	required	VARCHAR2(30)	Last name of consumer
custemail	optional	VARCHAR2(50)	Consumer email

---

[1] *For recurring credit transactions, enter a negative value in ps1_init and/or ps1_recur – e.g. -9.95*

ps1_cycle	required	NUMBER	Billing Cycle: -1= One-Time 1= Weekly 2= Monthly 3= Bi-Monthly 4=Quarterly 5= Semi-Annually 6= Annually 7= Bi-Weekly
ps1_recur	optional	XX.XX ex. 29.99	Number of days until recur begins. - Defaults to 0.00 if ps1_cycle is null or is equal to -1. - Defaults to ps1_init if ps1_cycle > 0 - Same format requirements as ps1_init apply.
ps1_days	optional	NUMBER	Defaults to ps1_cycle if no value is provided. If provided, the number must be an integer.
ps1_maxnb	optional	NUMBER	Maximum Number of Billings: -1 = Perpetual Billing n = Positive integer number (ps1_maxnb=2)
redirect_accept	optional	Full path URL	The URL location you want to redirect the customer upon an accepted transaction
redirect_decline	optional	Full path URL	The URL location you want to redirect the customer upon a declined transaction
authdata[2]	dependent on merchant setup	NUMBER	"authdata=1" is needed to receive the full consumer details of the session
meruser	required	VARCHAR2(16)	Merchant's Actum Portal username
merpass	required	VARCHAR2(14)	Merchant's Actum Portal password
syspass	required	VARCHAR2(16)	Merchant's assigned system password
identity[3]	dependent on merchant setup	NUMBER	"identity=1" is required for Plaid consumer identity pull requests on a per transaction level. The data retrieved may include the account owner's names, physical addresses, emails, and phone data. Please note that if a merchant provides this data in the query string, the merchant submitted email and address will take precedence over the data Plaid sends.
verifiedcons[4]	dependent on merchant setup	NUMBER	"verifiedcons=1" is required if the merchant wants to inform us that the consumer has positive history with them. This lets us know to treat the consumer as if they had positive history in our system.

Example POST Request to https://join.actumprocessing.com/Signup/SignupInit.cgi

chk:actum:yoursubid&custemail=johnd002@actumprocessing.com&ps1_init=15.00&ps1_desc =10+tokens&redirect_accept=https%3A%2F%2Fjoin.actumprocessing.com%2Fcgi-bin%2Fechoback.cgi%3Fresult=Accept&redirect_decline=https%3A%2F%2Fjoin.actumprocessing.com%2Fcgi-bin%2Fechoback.cgi%3Fresult=Decline&meruser=XXXXXX&merpass=YYYYYY&syspass=ZZZZZ

The **SignupInit** action will create the session, save the request data, and return to you a single plain-text key=value pair. If the session creation was successful, you'll get a response that looks like this:

url=https://join.actumprocessing.com/Signup/signupLoad.cgi;jsessionid=6DE977D83938CABA83E8098D70027F82

Upon a successful session creation, you would put the given URL in your web page that you present to the consumer. Note that you must use the semicolon, not a question mark, between the base URL and the jsessionid key.

If the session creation was unsuccessful, you'll get a response that looks like this:

error=Error Message

Repeat User Flow

For repeat users that have already linked their bank account through Plaid, merchants can bypass Authent*e*check™ by submitting the "consumer_code" which is the unique identifier for the consumer. The "consumer_code" is sent as one of the postback variables after the user completes the initial flow.

Request Method: **POST**
Endpoint: https://join.actumprocessing.com/cgi-bin/dbs/man_trans.cgi
Content Type: application/x-www-form-urlencoded or multipart/form-data

FIELD NAME	REQUIRED	TYPE	DESCRIPTION
parent_id	required	VARCHAR2(12)	Your ParentID assigned by Actum
sub_id	required	VARCHAR2(12)	Your SubID assigned by Actum
pmt_type	required		pmt_type=chk
order_id	required	NUMBER	The orderid of the consumer's initial transaction request

consumer_code	required	VARCHAR2(32)	The unique identifier for the consumer. Store this variable to initiate the Authent*e*check™ user interface module for subsequent purchases.
initial_amount	required	XX.XX ex. 49.95	Initial amount of the bill
billing_cycle	required	NUMBER	One-Time Billing = -1
trans_modifier	dependent on merchant setup		trans_modifier=S to designate a "same-day" transaction. If this value is not passed in, the transaction will be sent as "next-day".
balance_refresh	optional	NUMBER	balance_refresh=1 will force a balance refresh from Plaid if the default balance refresh time (12 hours) hasn't expired yet.

Decline Reasons

Possible decline reason values can be sorted into one of two categories:

- Authentecheck-specific Decline Messages
- Legacy Decline Codes (Note: these are returned during the *Transaction Processing* stage.

It is possible to have more than one decline reason per transaction request, in which case they will be listed in comma-delimited format such as the examples below.

- No Routing Nbr, Can't Originate to AcctType CD
- Can't Originate to AcctType MONEY_MARKET, Insufficient Funds

Authentecheck-Specific Decline Reasons

MESSAGE	DESCRIPTION	STAGE
Flagged Identity	The digital fingerprint (sourced from the user's browser) matches that of a previously flagged user.	Module Load
Invalid Order	An order matching the order_id and consumer _code values in the request URL string does not exist.	Module Load

Incomplete Data	The dataset is missing at least one of the following fields: routing number, account number.	Dataset Validation
Invalid Account	At least one of the following fields has an invalid value: routing number, account number, account type.	Dataset Validation
Negative Database	The routing and account numbers match those of a previously originated ACH entry that was returned.	Dataset Validation
Insufficient Funds	The account balance is less than the risk- calculated minimum required balance or a past entry that was originated to the account was returned R01 or R09.	Dataset Validation
After Cut-Off	The transaction request would have been processed in the next Same Day ACH Batch, but the Merchant is not configured for this service. Please contact the ACTUM Support Team.	Transaction Processing

Legacy Decline Codes

ERROR CODE	DESCRIPTION
DAR104	Account number length error (greater than 17 digits)
DAR105	Account number follows commonly recognized construction for fake accounts
DAR108	Routing number is invalid
DCR103	Consumer name follows commonly recognized construction for fake accounts
DCR105	Email address domain is invalid
DCR106	Account number has been scrubbed
DMR001	Invalid merchant
DMR002	Invalid billing profile
DMR004	Invalid consumer code
DMR005	Invalid transaction request due to missing required field(s)
DMR006	Invalid payment type (not supported for this merchant)
DMR007	Invalid origination code
DMR106	Invalid dollar amount
DMR109	Invalid merchant account ID; must use an originator ID (child SUBID)
DMR201	Exposure limit was exceeded: total amount per transaction
DMR202	Exposure limit was exceeded: total amount per day
DMR203	Exposure limit was exceeded: total count per day
DMR204	Exposure limit was exceeded: total amount per month
DMR205	Exposure limit was exceeded: total count per month
DOR001	Cannot update order: an upgrade has already been processed
DOR002	Cannot update order: a recur has already been processed
DOR003	Cannot update order: a return has already been processed
DOR004	Cannot update order: this order does not exist
DOR005	Cannot update order: this order is inactive
DOR006	Cannot update order: this order does not match this merchant
DTE200	Account number was submitted to a third-party verification database and failed
DTE201	Account number was submitted to a third-party verification database and encountered an error
ESD001	Failed to insert record into database: generic error

Postback Data

For the **first-time user flow**, we provide the details of each successfully processed transaction in a POST that is separately delivered to a "postback URL," scripted to receive these transaction processing results.

The "postback URL" is configured in our system by a member of the Actum Merchant Support team. See Table 2 for the list of "postback" variables.

Example Postback Data

TABLE 2: POSTBACK VARIABLES		
KEY NAME	**VALUE EXAMPLE**	**DESCRIPTION**
action	add	A status variable, where add means the transaction was successfully processed. Authentecheck™ merchants do not receive any variable action other than add. Note: transactions that failed to process do not result in a POST being delivered.
result	1	Another status variable that indicates the payment was successful. 1 indicates the transaction was successful.
consumer_code	7nzmKKlmjfCCNX ToIqX8zvRBW73vorH	The unique identifier for the consumer. Store this variable to initiate the Authentecheck™ user interface module for subsequent purchases.
orderinfo	User9981S0004	The internal unique identifier or merchantdata value, provided by the merchant in the URL string for initiating the Authentecheck™ UI module. Use this value to match the POST to the end-user, the session, the payment, or any combination thereof.
siteid	TEST001	The sub_id of the merchant initiating the Authentecheck™ UI Module.
orderid	19527159	The unique identifier that is assigned to the transaction (and subsequent recurring transactions if the billing cycle is NOT set to One-Time or ps1_cycle > 0). This same unique identifier is provided in the "redirect URL" string, so that you can relate the live user's session with the "postback" data.
historyid	84955739	For recurring transactions, each transaction in the series of payments is assigned a unique identifier or historyid, while the same orderid identifies all payments in the series.
amount	995	The transaction amount is in cents, instead of dollars, and does not include decimals or commas. Divide this value by 100 before comparing it against the transaction amount dollar value provided in ps1_init.
custname	Bob Yakuza	The first and last name of the user that was provided by the merchant in the URL string for initiating the Authentecheck™ UI module.
acctname	Robert A Yakuza	The account holder's name that was provided by the user's financial institution. This value will be used to identify the Receiver in the ACH Entry.

billdata	{}	Payment details in JSON format. See Table 2.1.
authdata	{}	Additional data provided by the end-user's financial institution, in JSON. See Table 2.2.

TABLE 2.2: POSTBACK JSON VARIABLES – BILLDATA

KEY NAME	VALUE EXAMPLE	DESCRIPTION
init	9.95	The transaction amount or **ps1_init** provided by the merchant in the UI module URL string
cycle	2	Value provided by the merchant for **ps1_cycle**
recur	29.95	Value provided by the merchant for **ps1_recur**
days	7	Value provided by the merchant for **ps1_days**
maxnb	60	Value provided by the merchant for **ps1_maxnb**

TABLE 2.2: POSTBACK JSON VARIABLES – AUTHDATA

JSON PATH	DATA TYPE	VALUES
$.holder.name	Object (128)	N/A
$.holder.name.first	String (16)	
$.holder.name.fullName	String (128)	
$.holder.name.last	String (32)	
$.holder.name.middle	String (16)	
$.holder.ownership	String (16)	JOINT_OWNER, CUSTODIAN, PRIMARY, BUSINESS, (NULL)
$.bank_name	String (64)	
$.acct_number	String (128)	Masked account number
$.display_acct	String (128)	Last 4 digits of the actual account number will display in the event where the acct_number is masked/tokenized
$.routing_number	String (9)	Masked ABA number
$.currentBalance	Object (64)	N/A
$.currentBalance.currency	String (4)	USD
$.currentBalance.amount	Number (16)	
$.availableBalance	Object (64)	N/A
$.availableBalance.currency	String (4)	USD
$.availableBalance.amount	Number (16)	

The POST data contains the transaction's **orderid** and **orderinfo** (or whatever unique identifier you provided for **merchantdata** in the Authent*e*check™ user interface module URL string). These same unique identifiers are provided in the "redirect URL", so that you can relate the live user's session with the "postback" data. Please note there may appear other fields with no data attached that are applicable to non-Authentecheck or other legacy merchants.

Redirect URLs

Once the end-user successfully logs into their financial institution's site, and Actum can pull the necessary data to create an ACH Entry, the user will be taken to a results page within the page where they will see a variation of one of two messages based on the merchant/redirect settings:

1. A debit transaction for **$XX.XX** to **Your Company Name** has been approved and will be withdrawn from your account. Your order number is **orderid**. Please save this number for your records.
2. Your order has been declined. You will not be charged.

If you would like to automatically redirect the user from the results page to a different page, depending on whether the transaction was accepted or declined, please provide the "redirect URLs" to a member of the Actum Support Team to configure in our system for you.

Alternatively, you may pass in your redirects through the URL string using the following parameters.

- redirect_accept
- redirect_decline

Note that the "redirect URL" is appended with the transaction's **order_id** and **merordernumber** in order to relate the end of the live user's session with the POSTBACK data.

The "redirect URL" for [b] declined orders should send the user backwards in the payment flow, e.g., the page immediately preceding the Authent*e*check™ user interface module. This page is often where the user selects their preferred payment method. The "redirect URL" for [a] successful orders should send the user forward in the payment flow. However, we recommend that you add a back- end payment verification step with the POSTBACK data before completing the payment flow.

If the user encounters a connection error or sat idle for too long on the Authent*e*check™ module, you can use a separate "TIMEOUT redirect URL" to redirect the user back to the first step of the purchase flow or to any page you feel is appropriate. This URL will also need to be supplied to the Actum Support Team for configuration.

The parameters listed below are the possible values that can be returned based on how your redirect URL is configured.

- parent_id
- sub_id
- custname
- custaddress1
- custcity
- custstate
- custzip
- custemail

- merordernumber
- sitename
- siteurl

In addition to the above, the values listed below can be returned based on the transaction result.

Accepted:
- consumer_code
- order_id
- history_id
- cleardate

Declined:
- consumer_code
- order_id
- decline_reason

Webhooks

For merchants who prefer notifications via webhooks, please let your Actum Merchant Support representative know. Actum would need to set the webhook enabled URL internally.

Origination Webhook

For Originations, a webhook events record will be inserted when we upload a file to the ODFI. The POST will be sent to the merchant no later than 3 minutes after the file is uploaded. The POSTDATA will be sent in a JSON data block that matches the following format:

```
{
"originations": [
            {"trans_id":88151319, "clear_date":"10/29/2021"},
            {"trans_id":88151335, "clear_date":"10/29/2021"},
            {"trans_id":88151357, "clear_date":"10/29/2021"},
            …
            {"trans_id":88128429, "clear_date":"10/29/2021"}
            ]
{
```

Please note there will be no linefeed characters. It will be a single line of data.

The *trans_id* is the historykeyid of the transaction and *clear_date* is the date it should be clear of any non-unauthorized returns, which is 2 business days after the effective entry date of the transaction. If there are 10 transactions in the origination file, there will be 10 *'{"trans_id":NNNNNNNN, "clear_date":"MM/DD/YYYY"}'* items in the list. If there are 200 transactions in the file, there will be 200 such items in the list. Also, one postback will be sent per origination file.

Returns Webhook

For returns, we will insert a webhook events record for each individual return received. The JSON data block will match the following format, minus linefeed characters.

```
{
    "trans_id": 87654321,
    "order_id": 23456789,
    "return_desc": "<Rcode desc>"
}
```

The description will be the Return Code and description. By Example:

> *R01 – Insufficient Funds*
> *R02 – Account Closed*
> *R07 – Authorization Revoked by Customer*

Post-Processing Tools

Transaction Status API Call

Endpoint: https://join.actumprocessing.com/cgi-bin/dbs/man_trans.cgi
Request Method: POST
Content Type: application/x-www-form-urlencoded or multipart/form-data

FIELD NAME	REQUIRED	TYPE	DESCRIPTION
username	required	VARCHAR2(16 BYTE)	Merchant's Actum portal username
password	required	VARCHAR2(14 BYTE)	Merchant's Actum portal password
action_code	required	VARCHAR2(1 BYTE)	action_code=**A**
prev_history_id	if order_id not provided	NUMBER	history_id of the transaction you want to collect status of
type	optional	VARCHAR2(8 BYTE)	Basic or extended data returned. ("basic" | "extended") If neither are provided then default=basic).
order_id	if prev_history_id not provided	NUMBER	order_id of the transaction you want to collect the status of

The response may contain the following:

- curr_bill_status:
    - *Debit - CheckAuth:012345678*
    - *Credit - CheckAuth:012345678*
    - *Returned – Return Reason (RCode)*
    - *Declined – Merchant Request; Revoked by ACTUMUSER*

- origination_status:
  - *Originated*
    - The transaction has been written to a bank file
  - *Pending*
    - The transaction has **not** been written to a bank file
- refund_status
- join_date
- amount
- curr_status:
  - *Debit*
  - *Credit*
  - *Settled*
  - *Refunded*
  - *Returned*
  - *Declined*
  - *Stopped* (Merchant revoked)
- details: definition of R (return) code; authcode for debit / credit transaction
  - *Account Closed* (Return)
  - *CheckAuth:102953203* (Debit & Credit)
  - *Merchant Request; Revoked by ACTUMUSER*
- return_code: *R01, R02, R03*, etc…
- settlement_date (only for type=extended)
- recurstatus (only for type=extended)
- billing_cycle (only for type=extended)
- last_billing_date (only for type=extended)
- next_billing_date (only for type=extended)
- error

Example Responses

Debit Origination:

If *origination_status=Originated*, the transaction has already been written to a bank file and it is too late to modify or revoke.

curr_bill_status=Debit - CheckAuth:103054466
origination_status=Originated
join_date=04/25/2023
amount=610.53
billing_cycle=One-Time/None
last_billing_date=04/25/2023
max_num_billings=1
curr_status=Debit
details=CheckAuth:103054466

Credit Origination:

curr_bill_status=Credit - CheckAuth:102927238
origination_status=Originated
join_date=04/18/2023
amount=68.85
billing_cycle=One-Time/None
last_billing_date=04/18/2023
max_num_billings=1
curr_status=Credit
details=CheckAuth:102927238

Return:

curr_bill_status=Returned - No Account/Unable to Locate Account (R03)
origination_status=Pending
recurstatus=Inactive
join_date=12/01/2021
amount=69.95
billing_cycle=Quarterly
last_billing_date=12/01/2021
max_num_billings=-1
curr_status=Returned
details=No Account/Unable to Locate Account
return_code=R03

Settlement:

curr_bill_status=Settled - CheckAuth:012345678
origination_status=Pending
settlement_date=12/10/2021 recurstatus=Inactive
join_date=12/01/2021
amount=69.95
billing_cycle=Quarterly
last_billing_date=12/09/2021
max_num_billings=-1
curr_status=Settled
details=CheckAuth:012345678

Declined:

curr_bill_status=Declined - Invalid ABA Number
origination_status=Pending recurstatus=Inactive
join_date=10/18/22022
amount=39.95
billing_cycle=Monthly
last_billing_date=11/19/2022

max_num_billings=-1 curr_status=Declined
details=Invalid ABA Number

Declined by Merchant Request (Revoked):

curr_bill_status=Declined - Merchant Request; Revoked by ACTUMUSER
origination_status=Stopped
join_date=04/01/2023
amount=1.50
billing_cycle=One-Time/None
last_billing_date=04/01/2023
max_num_billings=1
curr_status=Declined
details=Merchant Request; Revoked by ACTUMUSER

Notice of Change (NOC):

curr_bill_status=Debit - Incorrect Routing Number: 012345678 origination_status=Pending
join_date=04/01/2022
amount=0.00
billing_cycle=One-Time/None
last_billing_date=04/07/2022
max_num_billings=1
curr_status=PreAuth
details=Incorrect Routing Number:102945278

Revoke Request API Call

Endpoint: https://join.actumprocessing.com/cgi-bin/dbs/man_trans.cgi
Request Method: POST
Content Type: application/x-www-form-urlencoded or multipart/form-data

FIELD NAME	REQUIRED	TYPE	DESCRIPTION
username	required	VARCHAR2(16 BYTE)	Merchant's Actum portal username
password	required	VARCHAR2(14 BYTE)	Merchant's Actum portal password
syspass	required	VARCHAR2(16 BYTE)	Merchant's system password assigned by Actum
action_code	required		action_code=K
prev_history_id	if order_id not provided	NUMBER	history_id of the transaction you want to revoke
order_id	if prev_history_id not provided	NUMBER	order_id of the transaction you want to revoke

The response may contain the following:

- status=success
- status=Error (error=Order Number Not Found, Transaction Originated to Bank)

Processing Cutoff Times
All times are in CST

Window	Merchant Cutoff	Settlement Time**
Same Day 1	7:00am	12:00pm
Same Day 2	11:00am	4:00pm
Same Day 3	2:00pm	5:00pm
Regular Daily	5:00pm	7:30am (next banking day)*
Late Night	9:00pm	7:30am (next banking day)*
Sunday	7:00pm	7:30am (next banking day)*
Holidays (if Monday)	7:00pm	7:30am (next banking day)*
Canadian EFT	9:00am	7:30am (next banking day)*

*Or the opening of the Bank, whichever is later.
**Settlement indicates the time the Receiver should see the debit/credit hit their account.