PAYNETZ

[Net Banking / Payment Gateway Solution]

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ELECTRONIC PAYMENT INTERFACE

WHAT IS EPI?

The Electronic Payment Interface (EPI) is an API provided by atom Technologies on its Paynetz platform to facilitate online transfer of money. This facility allows for users to transfer funds from one account to another.

HOW IT WORKS

To use the Paynetz EPI, a merchant should register with Paynetz. To initiate a customer's electronic payment, the merchant sends an EPI request to Paynetz. The EPI request facilitates a transfer of funds between the customer and merchant via Paynetz. The Paynetz platform validates the merchant and responds with an XML payload if successful. Based on the parameters in the XML, the merchant site has to send a new EPI request to Paynetz. The list of banks supported on the Paynetz system is given to the merchant, which is redirected to the customer. The customer then chooses the bank through which he/she wishes to do the payment. The EPI redirects the customer to the corresponding bank's net banking interface. The customer can now complete the transaction.

On completion of the customer's transaction with the bank, the bank sends a response to Paynetz platform indicating the status of the transaction. This response is redirected to the merchant and then to the customer. The electronic payment request initiated by the customer is now complete.

Note: On receiving response from bank, Paynetz platform post parameters on to merchant configured return (success / failure) url.

The Paynetz EPI works by transferring money from the customer's account into an account that atom holds with the bank chosen for the transaction.

After the transaction is completed, a reconciliation process occurs between the bank and atom. The funds are transferred into the merchant's account after the reconciliation process.

Given below is a sequence diagram explaining the flow of events:

SEQUENCE OF EVENTS

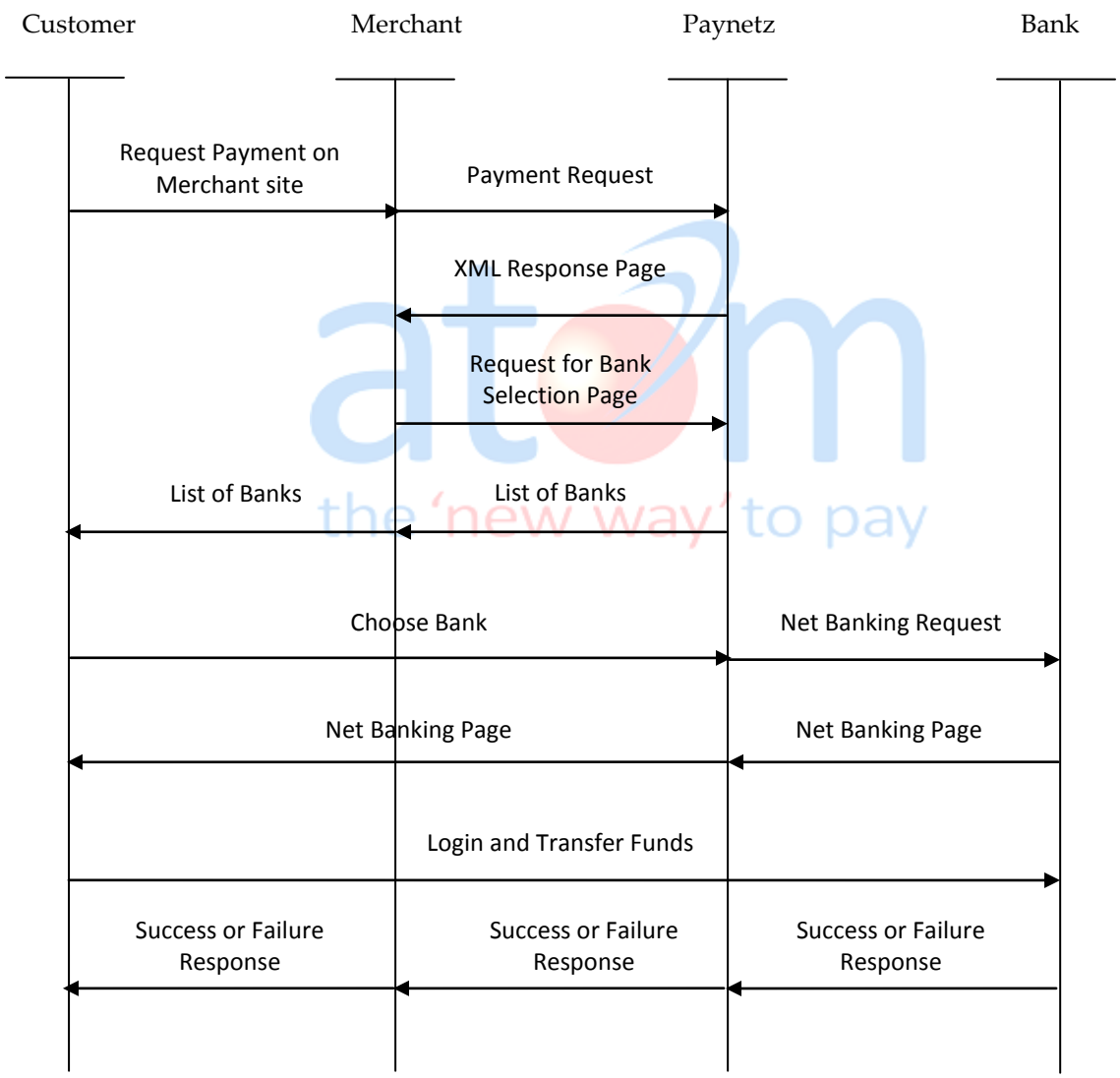


Fig. 1: Net Banking Sequence Diagram

STEP-BY-STEP FLOW :

A step-by-step flow of how an electronic payment can be done through the Paynetz EPI is described below.

Process Flow (Merchant Side)

- The customer goes to the Merchant's web page.
- The customer goes through the shopping cart and finally lands on the Payment Option Page of atom where it shows options like Net Banking, Credit / Debit Cards.
- The customer has option to pay either through Net Banking or Credit / Debit Cards.
- If the Net Banking Option is selected by the customer, then the customer is re-directed to the atom's page, where-in he has option to select one of the Banks from list of Multiple Banks.
- If Credit / Debit Option is selected by the customer, then the customer is re-directed to atom's Page, wherein he has an option to enter the credit card / debit card details.
- On the confirmation from the bank, the success / failure will be Posted back to the URL provided by the Merchant.

Integration Process Flow (1st Request)

The customer enters the merchant website to make an electronic payment. The merchant initiates the payment at the Paynetz EPI by sending a POST method request to the URL:

http://<atomIP>/paynetz/epi/fts

Test Server Details

- Test Server IP: 203.114.240.77
- Port for HTTP: 80
- Port for HTTPS: 443

Sample URL:

http://203.114.240.77/paynetz/epi/fts?login=<userid>&pass=<password>&ttype=NBFundTransfer&prodid=NSE&amt=50&txncurr=INR&txnscamt=0&clientcode=007&txnid=1234&date=02/02/2009&custacc=123456789&udf1=<Customer Nam>&udf2=<Customer Email ID>&udf3=<Customer Mobile No>&udf4=<Billing Address>&udf5=udf5&udf6=udf6

RESPONSE XML PAGE

Upon sending the request in the format specified above, a response in XML format is obtained. This needs to be parsed to obtain the relevant information. A sample XML response is as shown below.

```
<?xml version="1.0" encoding="UTF-8" ?>
<MMP>
 <MERCHANT>
  <RESPONSE>
   <url>http://203.114.240.77/paynetz/epi/fts</url>
   <param name="ttype">NBFundTransfer</param>
   <param name="tempTxnId">2418</param>
   <param name="token">ClT6Sr4mjGhvFpsiBaUwaorib62ihEwLUh69hNKBUAE%3D</param>
   <param name="txnStage">1</param>
  </RESPONSE>
 </MERCHANT>
</MMP>
```

Client Code Logic

http:// <atomIP>/paynetz/epi/fts?login=<Login ID shared by atom>&pass=<Password shared by atom>&ttype=NBFundTransfer&prodid=NSE&amt=100&txnscamt=0&txnid=091223000005&clientcode= **TkFWSU4%3d**&custacc=0253143165113216&txncurr=INR&date=23/12/2009&<Customer Nam>&udf2=<Customer Email ID>&udf3=<Customer Mobile No>&udf4=<Billing Address>&udf5=udf5&udf6=udf6

In the above url the client code is **NAVIN**, this is Base64 encoded which gives **TkFWSU4=** and this in turn is Url Encoded which gives **TkFWSU4%3d**

Parameter Details

	Parameter Name	Parameter Description	Parameter Sample Value
1	login	User ID obtained on registration of Merchant URL's and IP	Provided by atom
2	pass	Password obtained on registration of Merchant URL's and IP	Provided by atom
3	ttype	NBFundTransfer/CcFundTransfer in this parameter	“NBFundTransfer for Net Banking & CCFundTransfer for IPG”
4	prodid	Product ID as decided and approved by the Merchant	"NSE" can be used for Testing Purposes
5	amt	Amount to be transferred	Actual Amount of the Product / Service
6	txncurr	Currency	"INR"
7	txnscamt	Transaction Service Charge Amount. Charged by the merchant.	Keep it as "0"
8	clientcode	Client code	Code of the end customer. If code is not available then always pass a standard Value. Encryption needs to be used.
9	txnid	Merchant’s Transaction ID	Unique Transaction ID generated by the Merchant
10	date	Date of Transaction in DD/MM/YYYY HH:MM:SS format	Exact date and time stamp
11	custacc	Customer’s Account ID	Customer's Account ID from the Bank, if that is not available then always pass a standard 10-12 digit value
12	mdd	Application Identifier	For mobile WAP, channelid=mob otherwise ignore

13	Udf1	Customer Name	Name of end customer
14	Udf2	Customer Email ID	Email ID of end customer
15	Udf3	Customer Mobile No	Mobile No of end customer
16	Udf4	Billing Address	Billing address of end customer
17	Udf5	Merchant Data	Leave it blank
18	Udf6	Merchant Data	Leave it blank

Integration Process Flow (2nd Request)

This XML has to be parsed and a request has to be send in form of a 2nd URL

The parameter values have to be populated from the XML.

Sample URL

http://203.114.240.77/paynetz/epi/fts?ttype=NBFundTransfer&tempTxnId=2418&token=ClT6Sr4mjGhvFpsiBaUwaorib62ihEwLUh69hNKBUAE%3D&txnStage=1

Parameter Details

	Parameter Name	Parameter Desc./Value
1	url	URL to which the request is to be sent
2	ttype	NBFundTransfer / CCFundTransfer
3	tempTxnId	A temporary value to mapped to the token.
4	token	An encoded token to validate the request. The details to be taken from the XML response of the 1st URL.
5	txnstage	Used to identify at what stage the transaction is

BANK SELECTION PAGE:

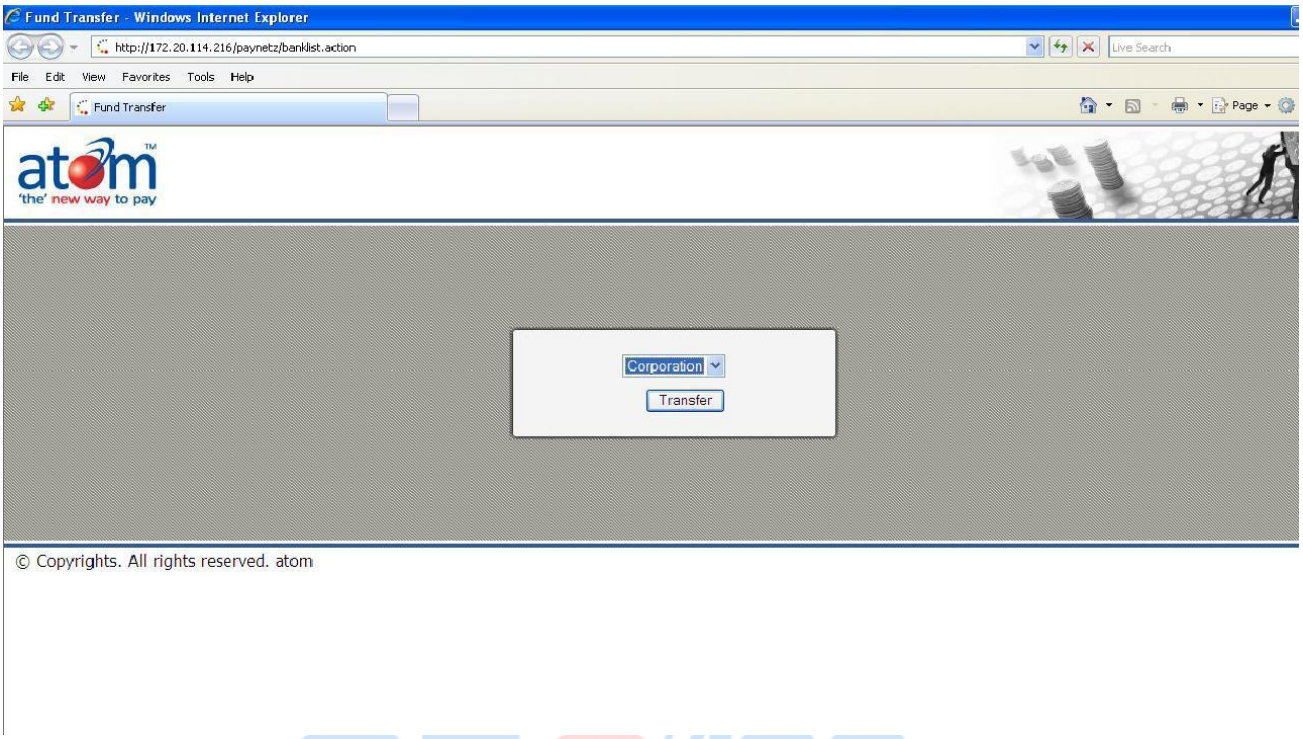
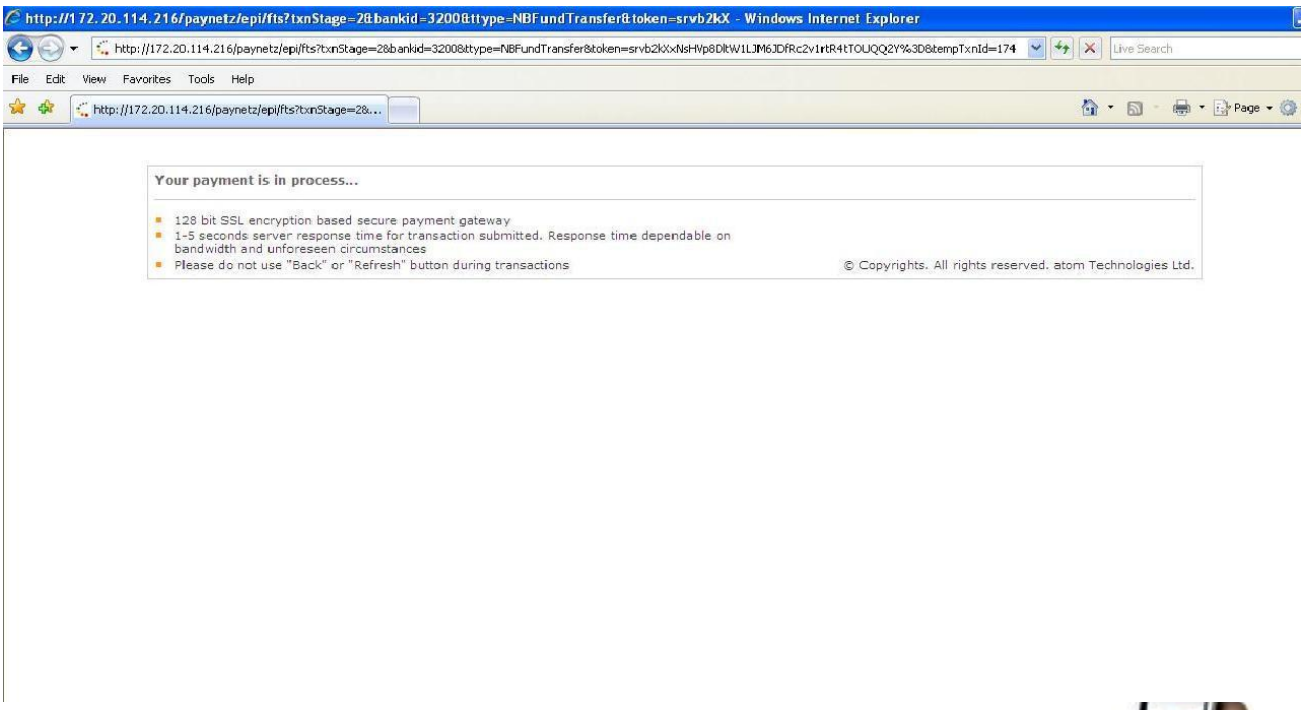


Fig. 2: Bank Selection Page

Upon receiving the second request from the merchant, bank selection page is displayed in case of Net banking. The customer is given the option of choosing through which bank he wishes to do a fund transfer. Once the bank is chosen, the user can click on the "Transfer" button to proceed.



CARD DETAIL PAGE:

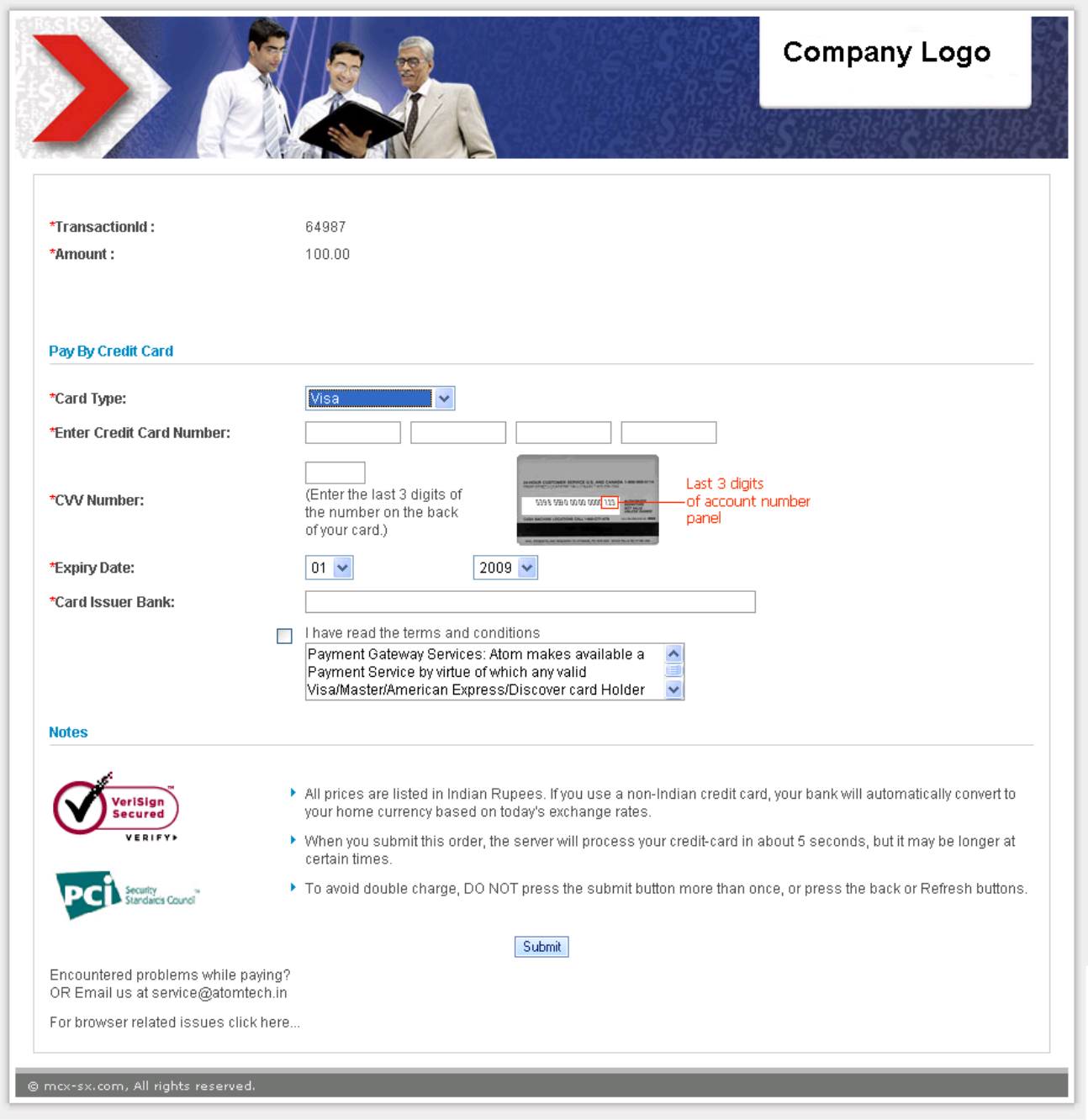


Fig. 2: Card Detail Page

In case of Credit card, upon receiving the second request from the merchant, credit card entry page is displayed. The customer is prompted to enter the Card Type, Card Number, CVV, Expiry Date and Card Issuer Bank name.

Posting Details

The confirmation from the Bank (success / failure) will be posted back to the Success / Failure URL provided by the Merchant.

The Merchant needs to display the appropriate message on the web page.

Posting Parameters

After the customer completes the fund transfer, the customer is redirected to the merchant's site. Herein, depending on whether the transaction was a success or a failure, the corresponding page would be shown to the customer (The merchant should finalize the content to be shown on the page).

The below are the posting parameters, that atom will post back

Name	Value	Description
mmp_txn	1111492	atom transaction ID. The ID is generated by atom
mer_txn	0001	Merchant's transaction ID
amt	100.0000	Amount
prod	NSE	Product ID. For testing you can use "NSE", for Production Purposes merchant can suggest the name.
date	Fri May 14 12:03:24 IST 2010	Date & Time Stamp of the Transaction
bank_txn	11114921	Bank Transaction ID. This ID is generated by the Bank
f_code	Ok	OK for Successful transaction , F for Failed Transaction
clientcode	Mt012	Client code needs to be Passed by the merchant. If different clients are not assigned client codes then, you can send a constant value.
bank_name	Atom Bank	For testing it will be a single bank called the "Atom Bank"

Transaction Tracking URL

This is called Transaction tracking URL which is provided to the merchant for such transactions which have timed out and their status has not been updated in the system after the first request was initiated.

Merchant will hit the atom paynetz system through Transaction Tracking URL after 15 minutes of the first transaction that was initiated and its status was not updated.

This functionality helps to check the status of the timed out transaction and update merchant's system accordingly.

Request format for tracking URL on test system :

http://203.114.240.77/paynetz/vfts?merchantid=7&merchanttxnid=1015&amt=10.00&tdate=2010-10-11&RU=http://203.114.240.77/paynetz/tfts

Parameters in the request string:

Parameter Name	Description
merchantid	Merchant ID provided by atom
merchanttxnid	Unique transaction ID sent by the merchant after the first transaction request was initiated
amt	Transaction amount
tdate	Transaction date in yyyy-mm-dd format
RU	Return URL provided by the merchant where he wants to update the transaction.

Response from Tracking url:

```
<?xml version="1.0" encoding="UTF-8" ?>
<VerifyOutput MerchantID="7" MerchantTxnID="1015" AMT="10.00" VERIFIED="FAILED" />
```

Parameter Name	Description
merchantid	Merchant ID provided by atom
merchanttxnid	Unique transaction ID sent by the merchant after the first transaction request was initiated
amt	amount
verfied	success/failure (status of the transaction)