
InterSwitch Bill Payment Integration

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1 OVERVIEW

1.1 Objective

The objective of this document is to define the specification and messaging structures for facilitating data exchange between the Interswitch Bill payment platform and your system for purposes of:

- Payment Notification to your system
- Customer Data Validation/Lookup by your system
- Customer Upload to Interswitch via the BookonHoldService
- Payment Retrieval via the BookonHoldService
- Payment Status Check via the BookOnHoldService

N.B: All sample requests and responses are included in a file attached to API.

Please note that this is a generic system and new tags can be added at any time. Do not hard code the structure of the xml requests. Your system should be able to retrieve data from the required fields and ignore others.

1.2 Service Specification

If you are implementing these:

- Payment notification
- Customer Data Validation/Lookup

Here is what you need to know:

The communication mode is HTTP POST (not SOAP)

The content type is text/xml.

The POST request will contain only XML

The request will be a RAW POST directly to stream and NOT in a parameter.

In the cases where you choose to implement Payment Notification and Customer Data Validation, you are expected to provide Interswitch with a SINGLE URL

So you will need to

1. Provide a HTTP/HTTPS URL to be the recipient of all messages coming from Interswitch
2. Validate and Lock down the requesting IP to Interswitch's.

However, if you are implementing these:

- Customer Upload via the BookonHoldService
- Payment Retrieval via the BookonHoldService
- Customer Status Check via the BookOnHoldService

Customer Upload via the BookonHoldService is to have the data resident on Interswitch.

Payment Retrieval via the BookonHoldService is to return details on a payment.

Customer Status Check via the BookonHold service is used when you want to find out if a payment has been made on a Reservation.

In that case, all you need do is call the available methods on the BookonHold service and note that:

The communication mode is via SOAP

The content type is **soap/xml**.

Service API

1.3 Payment Notification & Customer Data Validation/ Lookup

1.3.1 Payment Notification

The Payment notification Request from Interswitch is sent to your system once payment has been completed.

Things you want to remember:

1. There are **2 kinds of responses** to a Payment NotificationRequest
 - a. 0= Received Payment/ Received Duplicate Payment.
 - b. 1=Rejected by System/ Rejected Duplicate Payment
2. Each payment notification request reaching your system must be **identified uniquely using the PaymentLogId and Amount**.
So a check for duplicates **MUST** be implemented using these fields. This way you do not risk giving multiple credits on a single payment.
3. For PaymentNotificationRequests that you have identified as duplicates, **it is expected that you still send back the '0' Status**.

Amount Verification

One of the checks you should perform on your system before giving value on your Billing system is to ensure that the amount in the Notification corresponds to amount indicated by your system.

This is irrespective of whether the amount has been previously presented to the Interswitch Platform at the point of exchanging Customer Information.

Message type: PaymentNotificationRequest

Request Fields:

Field	M/O	Length	Format	Description
Payments	M			Container element for a collection of payments
Payment	M			Container element for a single payment
CustReference	M	20	String	Unique ID for the paying customer or specific order. Typically provided to the paying customer by the merchant
Amount	M	ANY	Numeric	Amount paid by the customer in Major Denomination. This must be verified before giving value to the Customer
PaymentMethod	M	ANY	String	Method by which customer made payment. See list of acceptable values in appendix

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PaymentReference	M	ANY	Alphanumeric	Unique reference for the payment as issued to the customer at the point of payment. This value is unique for all transactions.
PaymentLogId	M	ANY	Number	Unique integer ID for the payment
OriginalPaymentReference	M	ANY	Alphanumeric	Used in Payment Reversal Notification to indicate the Payment reference for the transaction which needs to be reversed
OriginalPaymentLogId	M	ANY	Number	Used in Payment Reversal Notification to indicate the Unique Integer ID for the transaction which needs to be reversed
ChannelName	M	10	String	Name of channel used for transaction. See acceptable values in appendix
Location	M	ANY	String	Location Payment was made
PaymentDate	M	ANY	Datetime	Date payment was made in format MM/DD/YYYY hh:mm:ss
InstitutionId	M	5	Alphanumeric	Unique ID given to the merchant
InstitutionName	M	ANY	String	Merchant's configured name within the Bill payment system
BranchName	O	ANY	String	Bank Branch where the payment was made, if applicable
BankName	M	ANY	String	Bank where the payment was made in case of a cash payment or bank whose card was used to pay in the case of a card based payment
CustomerName	M	ANY	String	Name of paying customer
OtherCustomerInfo	M	ANY	Alphanumeric	Further Details on paying customer
ReceiptNo	M	ANY	Numeric	Receipt Number issued to customer
CollectionsAccount	O	ANY	String	The account of the Collecting Bank
BankCode	O	3	String	A code representing the Bank where the payment was made or bank whose card was used to pay in the case of a card based payment
DepositorName	O	ANY	String	Name of person who made the payment
DepositSlipNumber	O	ANY	Alphanumeric	The number on the Deposit Slip used for payments
CustomerPhoneNumber	O	ANY	String	The Phone Number of the paying customer
CustomerAddress	O	ANY	Alphanumeric	The Address of the paying customer
PaymentCurrency	M	3	Numeric	The Code that identifies the currency in which the payment was made
ItemName	M	20	Alphanumeric	The name of an item that was paid for (There will always be at least one Item)
CategoryCode	O	10	Alphanumeric	
CategoryName	O	20	Alphanumeric	

ItemCode	M	10	Alphanumeric	The code of an item that was paid for (There will always be at least one item)
ItemAmount	M	ANY	Numeric	The amount that was paid for the item (Will be equal to Amount if only one item was paid for)
LeadBankCode	O	3	String	This code identifies the bank where the collected funds will be remitted to
LeadBankName	O	ANY	String	This is the name of the bank where the collected funds will be remitted to
LeadBankCbnCode	O	ANY	String	This is a unique code assigned to the LeadBank (in Nigeria)
Customer Address	O	ANY	String	This is the customer's address details
ThirdPartyCode	O	10	String	Code for Custom Data
ServiceUsername	O	ANY	Alphanumeric	Username to access FTP Location at Merchant's end
Fee Name	O	20	Alphanumeric	Name of Transactional Fee applied to the payment (purely informational)
ServicePassword	O	ANY	Alphanumeric	Password to access FTP Location at Merchant's end
FTPUsername	O	ANY	Alphanumeric	Username to access Service at Merchant's end
FTPPassword	O	ANY	Alphanumeric	Password to access Service at Merchant's end

Response Field: PaymentNotificationResponse

Field	M/O	Length	Format	Description
Payments	M			Container element for a collection of payments
Payment	M			Container element for a single payment
PaymentLogId	M	ANY	Numeric	Unique integer ID for the payment
Status	M	1	Numeric	Acknowledgement returned by Merchant to indicate if payment was received or not 0=Received / Duplicate Payment 1= Rejected by System
StatusMessage	O	ANY	Alphanumeric	Description of the Status

1.3.2 Payment Notification Variant

Reversal Request

This request is used to cancel/nullify/reverse a payment that has already been made sometime in the past.

This means that a payment notification request (credit) would have been initially sent. If the payment is cancelled on the Interswitch platform for some reason after proper authorization, a reversal request will be sent to your system to negate the effect of the initial transaction.

This is achieved by sending a PaymentNotificationRequest with a negative value in the Amount field.

The <IsReversal>tag will be set to True, the PaymentLogID will be different from the one used for the initial transaction. The paymentLogID and Payment Reference Number of the original request will be populated in these tags <OriginalPaymentLogId/> <OriginalPaymentReference/>. This is used to log the reversal request as a new transaction with a negative value.

Reversal Response

This is the response returned by the Merchant on processing the Reversal Request.

Response Field: PaymentNotificationResponse

Field	M/O	Length	Format	Description
Payments	M			Container element for a collection of payments
Payment	M			Container element for a single payment
PaymentLogId	M	ANY	Numeric	Unique integer ID for the payment
Status	M	1	Numeric	Acknowledgement returned by Merchant to indicate if payment was received or now 0=Received (Already) 1= Rejected
StatusMessage	O	ANY	Alphanumeric	Description of the Status

1.3.3 Customer Validation/Lookup

Message type: CustomerInformationRequest

This request is sent to the Merchant's system to validate the Customer who needs to pay.

Field	M/O	Length	Format	Description
MerchantReference	M	ANY	Alphanumeric	Unique ID given by Interswitch to the client using the bill payment solution
CustReference	M	ANY	Numeric	Unique ID for the paying customer or specific order. Typically provided to the paying customer by the merchant
PaymentItemCode	O	10	Alphanumeric	This is an agreed code indicating the item that the customer has indicated he wants to pay for.
FTPUsername	O	ANY	Alphanumeric	Username to access FTP Location at Merchant's end
FTPPassword	O	ANY	Alphanumeric	Password to access FTP Location at Merchant's end

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ServiceUsername	O	ANY	Alphanumeric	Username to access Service at Merchant's end
ServicePassword	O	ANY	Alphanumeric	Password to access Service at Merchant's end

Message type: CustomerInformationResponse

This is the response sent back on a CustomerInformationRequest

Field	M/O	Length	Format	Description
MerchantReference	M	ANY	Alphanumeric	Unique ID given by Interswitch to the client using the bill payment solution
CustReference	M	ANY	Numeric	Unique ID for the paying customer or specific order. Typically provided to the paying customer by the merchant
Status	M	ANY	Numeric	This is a status returned indicating if the Customer is valid or not 0= Valid 1=Invalid 2=Expired
CustomerReferenceAlternate	O	ANY	Alphanumeric	This is an alternate ID used to identify the same Customer
FirstName	O	ANY	Alphanumeric	This is the first name of customer
LastName	O	ANY	Alphanumeric	This is the surname of customer
OtherName	O	ANY	Alphanumeric	This is the middle name of customer
Email	O	ANY	Alphanumeric	This is the email address of the customer
Phone Number	O	ANY	Alphanumeric	This is the phone number of the customer
ThirdPartyCode	O	10	Alphanumeric	This is a unique code agreed between both Systems to group the customer in a category.
Amount	O	ANY	Numeric	This is the amount customer is expected to pay. Value should be in Major denomination
PaymentItems				Container element for a collection of payment items
Item				Container element for individual payment item
ProductName	O	ANY	Alphanumeric	This is the name of the item that customer should/can pay for
ProductCode	O	ANY	Alphanumeric	This is the code of the item that the customer should/can pay for
Quantity	O	ANY	Numeric	This is the number of item that customer should/can pay for
Price	O	ANY	Numeric	This is the unit price of the item that the

				customer should/can pay for
Subtotal	O	ANY	Numeric	This is the total amount that the customer should/can pay for LESS tax
Tax	O	ANY	Numeric	This is the additional cost added to the original cost of the item
Total	O	ANY	Numeric	This is the total amount that the customer should/can pay for.
Status/Message	O	ANY	Alphanumeric	Description of the Status

1.4 BookOnHold & Customer Update

Please refer to the wsdl in the APPENDIX section

The BookOnHold web service exposes certain methods.

1. The CreateBooking web method is used to make Reservations for payments so that the Customer can make payments at a later time. This is usually done by logging a Transaction ID after which the customer presents the ID at some later point. For this, you will need to call the **CreateBooking** Webmethod
2. The CustomerDataUpload web method is called when the customer information logged is to be reused for as long as possible by the returning customer.
3. The UploadThirdPartyInformation web method is used to upload custom data.
4. FetchBookingDetails is used to confirm the status of a booking/reservation that has previously been logged via the CreateBooking call.
5. FetchPaymentNotification is used to retrieve payment information.

1.4.1 CreateBooking

This method creates booking(s).

Request Fields

Field	M/O	Length	Format	Description
MerchantId	M	n/a	Numeric	Unique Id assigned to merchant by Interswitch.
ReferenceNumber	M	n/a	Numeric	Unique reference number for this booking. The first characters may be the MerchantId above.
ServiceNumber	O	n/a	Alphanumeric	PNR for this booking.
Description	O	n/a	Alphanumeric	Description of the booking
Amount	M	n/a	Numeric	Value to be paid for this reservation
DateBooked	O	19	String Date in format yyyy-MM-dd hh:mm:ss	Date when the reservation was made
DateExpired	M	19	String Date in format yyyy-MM-dd hh:mm:ss	Date when the reservation will expire

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FirstName	M	n/a	Alphabetic	Customer's First name
LastName	M	n/a	Alphabetic	Customer's Last name
Email	M	n/a	Alphanumeric	Customer's Email address
ItemCode	O	ANY	Alphanumeric	The unique code indicating the exact item linked to the reservation

Response Fields

Field	Description
ResponseCode	See Appendix 1.0
ReferenceNumber	See Above

1.4.2 FetchBookingDetails

This method retrieves all booking details.

Request Fields

Request Fields

Field	M/O	Length	Format	Description
MerchantId	M	n/a	Numeric	Unique Id assigned to merchant by Interswitch.
ReferenceNumber	O	n/a	Numeric	Unique reference number for this booking. The first characters must be the MerchantId above.

Response Fields

Field	Description
ResponseCode	See Appendix 1.0
ResponseMessage	Appendix 1.0 message for ResponseCode above with any other specific messages.
ReferenceNumber	Unique merchant generated reference number
Amount	Amount paid by customer
DateBooked	Date of Booking as sent by merchant
DateExpired	Date of Expiry as set by merchant
Status	Status of this booking i.e. Expired / Valid
PaymentStatus	Payment Status i.e. Pending / Completed
PaymentMethod	Method of Payment i.e. Cash or Card

PaymentReference	Unique system generated reference for this payment.
ChannelName	Channel where payment was made.
TerminalId	Terminal Id where payment was made.
Location	Location where the payment was made.
PaymentDate	Date of Payment.

1.4.3 CustomerDataUpload

This method saves customer detail(s) on the Interswitch Bill payment platform for local verification in anticipation of payment.

Request Fields

Field	M/O	Length	Format	Description
MerchantReference	M	n/a	Numeric	Unique Id assigned to merchant by Interswitch.
CustReference	M	n/a	Alphanumeric	Biller Unique reference for customer
CustomerReferenceAlternate	O	n/a	Alphanumeric	Biller Alternate Unique reference for customer.
CustomerReferenceDescription	O	n/a	Alphanumeric	
Amount	O	n/a	Numeric	Total amount expected by customer
FirstName	M	n/a	Alphabetic	
LastName	M	n/a	Alphabetic	

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Email	O	n/a	Alphanumeric	
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Response Fields

Field	Description
ResponseCode	See Appendix 1.0
CustReference	See Above

1.4.4 UploadThirdPartyInformation

This method saves custom/additional data on the Interswitch Bill payment platform for local verification in anticipation of payment.

Request Fields

Field	M/O	Length	Format	Description
MerchantReference	M	n/a	Numeric	Unique Id assigned to merchant by Interswitch.
ThirdParties	M	n/a	Numeric	Billers Unique reference for customer
ThirdParty	O	n/a	Alphanumeric	Billers Alternate Unique reference for customer.
Code	O	n/a	Alphanumeric	
Name	O	n/a	Numeric	Total amount expected by customer
Location	M	n/a	Alphabetic	

Response Fields

Field	Description
ResponseCode	See Appendix 1.0

1.4.5 FetchPaymentNotifications

This method retrieves information about the payments that have been made via the InterSwitch Bill payment platform for a service the merchant provides.

Request Fields

This method creates a booking.

Request Fields

Field	M/O	Length	Format	Description
MerchantReference	M	n/a	Numeric	Unique Id assigned to merchant by Interswitch.
LastNotificationDate	M	n/a	String Date in format yyyy-MM-dd hh:mm:ss	Date from when the payment should be fetched.

Response Fields:

Field	Description
ResponseCode	See Appendix 1.0
Payments	Container element for a collection of payments
Payment	Container element for a single payment
CustReference	Unique ID for the paying customer or specific order. Typically provided to the paying customer by the merchant
Amount	Amount paid by the customer. E.g. N20,000 .
PaymentMethod	Method by which customer made payment. See list of acceptable values in appendix
PaymentReference	Unique reference for the payment as issued to the customer at the point of payment. This value is unique for all transactions.
PaymentLogId	Unique integer ID for the payment
TerminalId	A unique ID for the terminal through which the payment is made
ChannelName	Name of channel used for transaction. See acceptable values in appendix
Location	Location Payment was made
PaymentDate	Date payment was made
InstitutionId	Unique ID given to the merchant

InstitutionName	Merchant's configured name within the Bill payment system
BranchName	Bank Branch where the payment was made, if applicable
BankName	Bank where the payment was made in case of a cash payment or bank whose card was used to pay in the case of a card based payment
CustomerName	Name of paying customer
OtherCustomerInfo	Further Details on paying customer
ReceiptNo	Receipt Number issued to customer
CollectionsAccount	The account of the Collecting Bank
BankCode	A code representing the Bank where the payment was made or bank whose card was used to pay in the case of a card based payment
ItemName	The name of an item that was paid for (There will always be at least one Item)
ItemCode	The code of an item that was paid for (There will always be at least one item)
ItemAmount	The amount that was paid for the item (Will be equal to Amount if only one item was paid for)

APPENDIX

1.0 Customer Validation Response Status

Value	Description
0	Valid Customer
1	Invalid Customer
2	Expired Customer

1.1 Payment Notification Response Status

Value	Description
0	Payment Successful Received (Already)
1	Payment rejected

1.2 Payment Channels

Value	Description
ATM	ATM
POS	POS
Web	Web
Mobile	Mobile
Kiosk	Kiosk
Voice	Voice
Bank Branc	Bank Branch

1.3 Payment Methods

Value
Cash
Cheque
Debit Card
Internal Transfer
Other Bank Cheque
Own Bank Cheque

1.4 Payment Currency

Value	Description
566	Nigerian Naira
840	US Dollar

1.5 BookOnHold/Customer Update Response Codes

WSDL:https://stageserv.interswitchng.com/uat_bookonhold/bookonhold.asmx

Code	Description
100	Successful
101	Invalid Request
102	Unauthorized
104	Compulsory Field Missing
105	Value of Field Invalid
106	Unknown Error
107	Invalid Merchant Identifier
108	Booking Reference already in use

1.6 Customer Validation

Value	Description
Request from Interswitch	<pre> <CustomerInformationRequest> <MerchantReference>3527</MerchantReference> <CustReference>0123</CustReference> <ServiceUsername/> <ServicePassword/> <FtpUsername/> <FtpPassword/> </CustomerInformationRequest> </pre>
Response from Biller	<pre> <?xml version='1.0' encoding='utf-8' ?> <CustomerInformationResponse> <MerchantReference>3527</MerchantReference > <Customers> <Customer> <Status>0</Status> <CustReference>4565</CustReference> </Customers> </MerchantReference> </CustomerInformationResponse> </pre>

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	<pre><FirstName>Saqir</FirstName> <LastName>Abubakar</LastName> <OtherName></OtherName> <Email></Email> <Phone></Phone> <ThirdPartyCode/> <StatusMessage>Customer is Valid</StatusMessage> </Customer> </Customers> </CustomerInformationResponse></pre>
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1.7 Payment Notification

Value	Description
Request from Interswitch	<pre> <PaymentNotificationRequest> <RouteId>HTTPGENERICv31</RouteId> <ServiceUrl>http://yoururlgoeshere.com</ServiceUrl> <ServiceUsername/> <ServicePassword/> <FtpUrl>http://yoururlgoeshere.com </FtpUrl> <FtpUsername/> <FtpPassword/> <Payments> <Payment> <ProductGroupCode>HTTPGENERICv31</ProductGroupCode> <PaymentLogId>8963962</PaymentLogId> <CustReference>ISP/13/136849/LAG</CustReference> <AlternateCustReference>--N/A--</AlternateCustReference> <Amount>10000.00</Amount> <PaymentStatus>0</PaymentStatus> <PaymentMethod>Cash</PaymentMethod> <PaymentReference>SBP BRH MTBS 7-07-2014 380481</PaymentReference> <TerminalId/> <ChannelName>Bank Branc</ChannelName> <Location>ILUPEJU BRANCH</Location> <IsReversal>False</IsReversal> <PaymentDate>07/07/2014 16:08:34</PaymentDate> <SettlementDate>07/08/2014 00:00:01</SettlementDate> <InstitutionId>MTBS</InstitutionId> <InstitutionName>Mutual Benefits Life Assurance</InstitutionName> <BranchName>ILUPEJU BRANCH</BranchName> <BankName>Sterling Bank Plc</BankName> <FeeName/> <CustomerName>BRIGHT OSEGHELE EHIZOJIE</CustomerName> <OtherCustomerInfo> </OtherCustomerInfo> <ReceiptNo>1418814666</ReceiptNo> <CollectionsAccount>900090559901000600</CollectionsAccount> <ThirdPartyCode/> <PaymentItems> <PaymentItem> <ItemName>Premium Payment</ItemName> <ItemCode>1100</ItemCode> <ItemAmount>10000.00</ItemAmount> <LeadBankCode>SBP</LeadBankCode> <LeadBankCbnCode>232</LeadBankCbnCode> <LeadBankName>Sterling Bank Plc</LeadBankName> <CategoryCode/> <CategoryName/> <ItemQuantity>1</ItemQuantity> </PaymentItem> </PaymentItems> <BankCode>SBP</BankCode> <CustomerAddress/> <CustomerPhoneNumber/> <DepositorName/> <DepositSlipNumber>6236182</DepositSlipNumber> <PaymentCurrency>566</PaymentCurrency> </pre>

Specification Document

	<pre><OriginalPaymentLogId/> <OriginalPaymentReference/> <Teller>AKINOLA BASHIRU</Teller> </Payment> </Payments> </PaymentNotificationRequest></pre>
Response from Biller	<pre> <PaymentNotificationResponse> <Payments> <Payment> <PaymentLogId>3193831</PaymentLogId> <Status>0</Status> <StatusMessage>Payment Received</StatusMessage> </Payment> </Payments> </PaymentNotificationResponse></pre>