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Apriva POS Message Specification

XML Interface - Master with Credit

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OVERVIEW

APRIVATalk is the base foundation for APRIVA's gateway solution. The framework that makes up APRIVATalk has full flow control, data integrity, and scalability. APRIVATalk contains multiple layers which can be implemented using different levels of complexity.

The focus of this document will be to enable the developer to begin using the APRIVA POS XML Protocol.

APRIVA MESSAGING STANDARDS

Message Flow

The APRIVA server will respond to all inbound authorization requests with an equivalent authorization response. The request will be considered complete upon approval unless a reversal is received prior to the next transaction.

General Transaction Flow

The transaction flow for XML traffic is as follows:

Transactions

Device	Apriva Gateway
- Sends Request	- Sends Response

Data Format

All fields within the APRIVA POS Messaging use one of the following formats for encoding.

Text Format	0 - 99 Alphanumeric Characters
Extended Text Format	0 - 255 Alphanumeric Characters
Short Number Format	Number between 1-65535
Long Number Format	Number between 1 - 4294967295
Currency Format	Decimal amount between 0.00 and 9,999,999,999.99

Communication

Overview

Apriva requires the use of TLS1 over raw TCP sockets for all communications. The SSL protocol is designed to make use of TCP as a communication layer to provide a reliable end-to-end secure and authenticated connection between two points over a network. This secure connection provides the following:

1. Authentication of both the client and the server using public key encryption
2. Ensures data integrity during an established session so that messages may not be intentionally or unintentionally tampered with.

3. Secures the privacy of the data during transport using encryption so any data sent across the communication channel is unreadable to an outside source.

All of the above requirements are used to ensure that sensitive cardholder data being sent from the client to the server are transmitted in the most secure way possible.

To implement TLS1 the client must request and install both the client and server certificate chain. These certificates must be installed such that the client application has access to them.

Header

During communication, the communication header wraps all requests to the server. It is used to determine what application the message is destined for as well as what device the request is coming from.

```
<AprivaPosXml DeviceAddress="">
```

Request		
Name	Data Format	Comments
NetworkID	Char	This device prefix is located in your issued certificate and will assist in the identification of your device.
Device Address	Text	A unique identifier that does not change and identifies the requesting device. For example a serial number or IP. Note: the number of concurrent transactions you are able to run is tied to the number of device addresses you support. Please see your certification analyst for further detail.

TRANSACTION TYPES

Overview

Credit Transactions

Credit transactions are for use with credit cards.

<Credit>... </Credit>

Debit Transactions

Debit transactions are for use with debit cards which pull funds directly from a customer bank account.

<Debit>... </Debit>

EBT Transactions

EBT transactions are for use with Electronic Benefit Cards.

<Ebt>... </Ebt>

Stored Value Card Transactions

Stored value transactions are for use with gift cards.

<StoredValue>... </StoredValue>

Check Processing Transactions

Check processing transactions are for use with paper checks.

<Check>... </Check>

Cash Transactions

Cash transactions are used to track cash that is received for goods.

<Cash>... </Cash>

Settlement Transactions

Settlement transactions are used to commit the transactions from the day so that funds may be transferred.

<Batch>... </Batch>

System Transactions

System transactions are used to check coverage and the availability of the processing system.

<System>... </System>

PROCESSING FLAGS

Store and Forward Request

Description: This field is used to indicate to the server that the transaction was stored on the device and transmitted at a later time. When this tag is set to true the Transaction Date and Transaction Time tags are required.

Tag Format: <StoreAndForward>

Data Format: 0 (false) / 1 (true)

BASE FIELD DEFINITIONS

Message Type

Description: Defines the type of message.

Tag Format: Attribute of transaction type tags.

<Credit MessageType="Request">

Data Format: Possible values are Request, Response, UploadRequest, or UploadResponse

Version

Description: The version number of the specific message.

Tag Format: Attribute of transaction type tags.

<Credit MessageType="Request" Version="5.0">

Data Format: Value is a numeric value containing a decimal.

Comment: Version varies depending on the number of modification that have been implemented.

Processing Code

Description: Defines the type of message. Allowing the server to know which specific message is being sent.

Tag Format: Attribute of transaction type tags.

<Credit MessageType="Request" Version="" ProcessingCode="Authorization">

Account Number

Description: The account number of the card.

Tag Format: <AccountNumber>

Data Format: Numeric value of the entire card number.

Amount

Description: The total amount to be processed for this transaction.

Tag Format: <Amount>

Data Format: Decimal representation of the dollar amount with a maximum value of XXXXXXXXXXXX.XX

Comment: In the case of a loyalty transaction in points 1 point would be transmitted as 100.

Stan

Description: The transaction identifier used by Apriva to control retries: System Trace Audit Number (STAN).

Tag Format: <Stan>

Data Format: Integer with minimum value of 1 and a maximum of 99999

Comment: This field is required to always increment and is maintained per Device Address. If a transaction is retried it may have the same STAN.

Transaction Time

Description: The time the transaction was run based on the terminal time. On a response it is the time the processor believes the terminal should have.

Tag Format: <TransactionTime>

Data Format: HH:MM:SS

Transaction Date

Description: The date the transaction was run based on the terminal time. On a response it is the date the processor believes the terminal should have.

Tag Format: <TransactionDate>

Data Format: MM/DD

Expire Date

Description: The expiration date on the card.

Tag Format: <ExpireDate>

Data Format: YY/MM

Entry Mode

Description: The mode in which the data was captured.

Tag Format: <EntryMode>

Data Format: See constant definitions

Entry Mode Type

Description: The type of device used to capture the transaction card information.

Tag Format: <EntryModeType>

Data Format: See constant definitions

Card Present Indicator

Description: Defines the state of a card that is manually entered.

Tag Format: <CardPresent>

Data Format: See constant definitions for accepted values.

Pos Condition Code

Description: Additional information necessary in order to run a MOTO (mail-order/telephone-order) or SET (secure electronic transaction) transaction.

Tag Format: <PosConditionCode>

Data Format: See constant definitions for accepted values.

Track 2 Data

Description: The track 2 magnetic stripe data from the card being processed.

Tag Format: <Track2>

Data Format: Alphanumeric String

RRN

Description: The Retrieval Reference Number (RRN) returned by the processor in response to a transaction.

Tag Format: <RRN>

Data Format: numeric value with a maximum of 16 digits.

Auth Id

Description: The approval code or authorization number from the processor for a transaction.

Tag Format: <AuthId>

Data Format: Alphanumeric String

Response Code

Description: The resulting code returned by Apriva in response to a transaction.

Tag Format: <ResponseCode>

Data Format: numeric integer

Comment: This code has a number of defined values as specified in the constants definition section. In addition each processor has a set of error codes that can be defined if needed.

Track 1 Data

Description: The track 1 magnetic stripe data from the card being processed.

Tag Format: <Track1>

Data Format: Alphanumeric String

Clerk /Operator ID

Description: The operator or clerk that ran the transaction on the device.

Tag Format: <ClerkID>

Data Format: Alphanumeric String

Error Stans

Description: The transactions that failed during a batch request.

Tag Format: <ErrorStans>

Data Format: Comma separated list of numeric STANS

Card Type

Description: The card type the processor believes the card is.

Tag Format: <CardType>

Data Format: See constant definitions for valid card types.

Comment: If this field is returned as a commercial, business or corporate card but was not detected as one during the transaction the device must prompt for the necessary customer code and tax information.

Batch Number

Description: The batch number the device is on.

Tag Format: <BatchNumber>

Data Format: Numeric integer with a minimum value of 1 and a maximum value of 999.

Transaction Database Identifier

Description: An identifier for the transaction in the Apriva System

Tag Format: <TransactionDbID>

Data Format: Alphanumeric String (([a-zA-Z0-9 -])*)

Description

Description: A description of the transaction.

Tag Format: <Description>

Data Format: Alphanumeric String (([a-zA-Z0-9 -])*)

Client Transaction Identifier

Description: A GUID for the transaction.

Tag Format: <ClientTransactionIdentifier>

Data Format: Alphanumeric String (([a-zA-Z0-9 -])*)

Data Field Requirements

- For online void transactions the STAN sent in field 11 is a new STAN and the STAN of the transaction being adjusted will be sent in field 63 0x2011
- Card holder data should always be protected. This includes masking any account number after it has been entered and never displaying track data.
- All invoice numbers sent to the host must be unique per batch.
- Card Is Present field should be sent on all manually entered credit transactions.
- Mod10 checks should be performed on all credit transactions. If the Mod 10 check fails then the terminal shall display an error indicating the card is not valid.
- The expiration date should be validated before sending on all transactions where the track data contains the expiration date or the merchant has manually entered the expiration date.
- All fields identified as required in the Apriva POS XML specification must be sent.

CREDIT MESSAGE SPECIFICATION

Message Types

The type of message plus the processing code allows the server to determine what type of transaction the server must process.

Type	Processing Code
Authorization/Verify	Authorization
Online Sale ⁽¹⁾	Sale
Store And Forward ⁽¹⁾	StoreAndFoward
Offline Sale (Force) ⁽¹⁾	OfflineSale
Offline Post Auth ⁽¹⁾	PostAuth
Offline Refund ⁽²⁾	Refund
Refund with Amount Validation	RefundWithAmountValidation
Offline Adjusted/Voided Sale	Adjust
Balance Inquiry	CreditBalanceInquiry
Reversal	SaleReversal

⁽¹⁾Note: Included in batch Credit Sales Count / Amount (*unless voided/reversed)

⁽²⁾Note: Included in batch Credit Refund Count / Amount (*unless voided/reversed)

Receipt Requirements

Credit transactions require the following information on all receipts:

1. Transaction Date Time
2. Transaction Number – Stan (Request)
3. Card Number
 - a. Last 4 digits of the Card Number (Request)
4. Amounts
 - a. Amount – Restaurant & Retail w/ Tip (Sale Amount before additional amounts)
 - b. Tip Amount – Restaurant Empty Line or Retail w / Tip (Request)
 - c. Total Amount - Restaurant Empty Line or Retail (Request)
 - d. Amount & Tip Line – Restaurant
5. Approval Code (Response)
6. Response Text (Response)
7. Detailed Response Data - Required if present above footer (Response)

Authorization/Verify

Description

This transaction will verify funds and hold the funds but not move the funds. A Force or Post Authorization transaction is required for funds to be received.

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Account Number	Text	C	Manual transaction only
Processing Code	See above	M	
Amount	Currency	M	
Stan	Short Number	M	New Stan assigned using standard Stan rules.
Transaction Time	Text	O	
Transaction Date	Text	O	
Expire Date	Text	C	Manual transaction only
Entry Mode Type	See Constant Defs	M	
Entry Mode	See Constant Defs	M	
Card Presence Indicator	See Constant Defs	C	Manual transaction only
POS Condition Code (Order Type)	See Constant Defs	C	MOTO/SET/Restaurant Industry Types
Track 2 Data	Text	C	Swiped Transaction only
Track 1 Data	Text	C	Swiped and Track 2 N/A
Clerk ID	Text	O	
Description	Text	O	Description of the transaction
Client Transaction Identifier	Text	O	GUID for the transaction
Additional Amounts		O	
Address Verification		O	

Card Verification		O	
Invoice Number		O	
MOTO Installment Data		C	MOTO Industry Type
Order Number		C	MOTO Industry Type
Restaurant Information		O	
Reporting Data		O	
Processor Defined Data		C	
UserData		O	
Token Data		C	Sent if available
Card Info		C	Contains information about the encrypted card data

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	
Stan	Short Number	C	
Transaction Time	Text	O	
Transaction Date	Text	O	
RRN	Text	O	
Auth ID	Text	C	
Transaction Database Identifier	Text	M	Identifies the transaction in the database
Response Code	Text	M	
Address Verification Response		O	
Card Verification Response		O	
Transaction Result Data		O	

Response Text		M	
Detailed Response Data		O	Required on receipt if present
Credit/Debit Balance Response Data		O	
Detailed Merchant Response Data		O	Required on merchant receipt if present
Detailed Customer Response Data		O	Required on customer receipt if present
Token Data		C	

Online Sale / Store & Fwd Sale

Description

This transaction is a credit sale where funds will be transferred upon the successful close of the batch. The online sale is considered a real time transition. A store & forward sale is used when coverage is poor and the transaction is transmitted to the server when coverage is reestablished. A Quick sale is an authorization that does not require a signature, normally used on a floor limit amount.

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Account Number	Text	C	Manual transaction only
Processing Code	See above	M	
Amount	Currency	M	
Stan	Short Number	M	For Store and Forwards this value should be assigned when it is sent to the host, not when it is stored.
Transaction Time	Text	O	
Transaction Date	Text	O	
Expire Date	Text	C	Manual transaction only
Entry Mode Type	See Constant Defs	M	
Entry Mode	See Constant Defs	M	
Card Presence Indicator	See Constant Defs	C	Manual transaction only
POS Condition Code (Order Type)	See Constant Defs	C	MOTO/SET/Restaurant Industry Types
Track 2 Data	Text	C	Swiped Transaction only
Track 1 Data	Text	C	Swiped and Track 2 N/A
Clerk ID	Text	O	
Description	Text	O	Description of the transaction
Client Transaction Identifier	Text	O	GUID for the transaction



Additional Amounts		O	
Address Verification		O	
Card Verification		O	
Commercial Card Data		C	Commercial Card
Invoice Number		O	
MOTO Installment Data		C	MOTO Industry Type
Order Number		C	MOTO Industry Type
Restaurant Information		O	
Reporting Data		O	
Processor Defined Data		C	
UserData		O	
Token Data		C	Sent if available
Card Info		C	Contains information about the encrypted card data

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	
Stan	Short Number	C	
Transaction Time	Text	O	
Transaction Date	Text	O	
RRN	Text	O	
Auth ID	Text	C	
Transaction Database Identifier	Text	M	Identifies the transaction in the database
Response Code	Text	M	

Card Type	Short Number	C	
Batch Number	Short Number	O	
Receipt ID	Text	C	
Address Verification Response		O	
Card Verification Response		O	
Transaction Result Data		O	
Response Text		M	
Detailed Response Data		O	Required on receipt if present. (N/A – S&F)
Credit/Debit Balance Response Data		O	
Detailed Merchant Response Data		O	Required on merchant receipt if present
Detailed Customer Response Data		O	Required on customer receipt if present
Token Data		C	

Offline (Force) Sale / Post-Auth

Description

These transactions require an authorization code that was previously retrieved through a voice authorization or an authorization transaction specified previously. These are offline transactions that will transfer the funds upon the successful close of the batch.

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Account Number	Text	M	
Processing Code	See above	M	
Amount	Currency	M	

Stan	Short Number	M	For Post-Auth transactions this value should be the value used for the original Auth. For Forces this value should be assigned when it is sent to the host, not when it is stored.
Transaction Time	Text	O	
Transaction Date	Text	O	
Expire Date	Text	C	Manual transaction only
Entry Mode Type	See Constant Defs	C	If card data provided
Entry Mode	See Constant Defs	C	If card data provided
Card Presence Indicator	See Constant Defs	C	Manual transaction only
POS Condition Code (Order Type)	See Constant Defs	C	MOTO/SET/Restaurant Industry Types
Auth ID	Text	M	Approval Code – Voice or from Pre-Auth
Clerk ID	Text	O	
Description	Text	O	Description of the transaction
Client Transaction Identifier	Text	O	GUID for the transaction
Additional Amounts		O	
Address Verification		O	
Card Verification		O	
Commercial Card Data		C	Commercial Card
Invoice Number		O	
MOTO Installment Data		C	MOTO Industry Type
Order Number		C	MOTO Industry Type
Restaurant Information		O	
Reporting Data		O	Force sale only
Processor Defined Data		C	Force sale only
UserData		O	

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	
Stan	Short Number	C	
RRN	Text	O	
Auth ID	Text	C	
Transaction Database Identifier	Text	M	Identifies the transaction in the database
Response Code	Text	M	
Card Type	Short Number	C	
Batch Number	Short Number	O	
Receipt ID	Text	O	
Address Verification Response		O	
Card Verification Response		O	
Transaction Result Data		O	
Response Text		M	
Credit/Debit Balance Response Data		O	
Token Data		M	

Offline Refund

Description

This transaction returns money to the card holder's credit card upon the completion of a batch settlement.

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Account Number	Text	M	
Processing Code	See above	M	
Amount	Currency	M	
Stan	Short Number	M	Value assigned when sent to the host, not when run on the terminal.
Transaction Time	Text	O	
Transaction Date	Text	O	
Expire Date	Text	C	Manual transaction only
Entry Mode Type	See Constant Defs	M	
Entry Mode	See Constant Defs	M	
Card Presence Indicator	See Constant Defs	C	Manual transaction only
POS Condition Code (Order Type)	See Constant Defs	C	MOTO/SET/Restaurant Industry Types
Clerk ID	Text	O	
Description	Text	O	Description of the transaction
Client Transaction Identifier	Text	O	GUID for the transaction
Additional Amounts		O	
Address Verification		O	
Card Verification		O	
Commercial Card Data		O	



Invoice Number		O	
MOTO Installment Data		O	MOTO Industry Type
Order Number		O	MOTO Industry Type
Restaurant Information		O	
Reporting Data		O	
Processor Defined Data		C	
UserData		O	
Card Info		C	Contains information about the encrypted card data

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	
Stan	Short Number	C	
Response Code	Text	M	
Transaction Database Identifier	Text	M	Identifies the transaction in the database
Receipt ID	Text	C	
Response Text		M	
Credit/Debit Balance Response Data		O	
Token Data		C	

Refund with Amount Validation

Description

This transaction returns *validated amounts* of money to the card holder's credit card upon the completion of a batch settlement. Amounts are validated against the original credit sale transaction and any refunds that might have been issued against the transaction already.

NOTE: Transactions aligned by Transaction Database Identifier (TransactionDbId).

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Processing Code	See above	M	
Amount	Currency	M	
Stan	Short Number	M	Value assigned when sent to the host, not when run on the terminal.
Transaction Time	Text	O	
Transaction Date	Text	O	
Multi Merchant Number	Text	C	Multi-Terminal accounts
Clerk ID	Text	O	
Lane Identifier	Numeric	O	Paylite-specific ID for the device used to make the transaction
Transaction Database Identifier	Text	M	Identifies the transaction in the database
Description	Text	O	Description of the transaction
Client Transaction Identifier	Text	O	GUID for the transaction
Additional Amounts		O	
Invoice Number		O	
Restaurant Information		O	
UserData		O	

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	
Stan	Short Number	C	
Response Code	Text	M	
Transaction Database Identifier	Text	M	Identifies the transaction in the database
Receipt ID	Text	C	
Response Text		M	
Credit/Debit Balance Response Data		O	
Token Data		C	

Adjust / Void

Description

This transaction can be used to cancel a previous Sale transaction or adjust the amount the transaction should be processed for.

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Processing Code	See above	M	
Amount	Currency	M	
Stan	Short Number	M	Stan of the original transaction to be adjusted or voided.
Transaction Time	Text	O	
Transaction Date	Text	O	
Lane Identifier	Numeric	O	Paylite-specific ID for the device used to make the transaction
Description	Text	O	Description of the transaction
Client Transaction Identifier	Text	O	GUID for the transaction
Auth Id	Text	M	AuthId from the original request
Clerk ID	Text	O	
Additional Amounts		O	
Invoice Number		O	
Restaurant Information		O	
UserData		O	
Processor Defined Data		C	

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version	See Constant Defs	M	
Processing Code	See above	M	
Stan	Short Number	C	
RRN	Text	O	
Auth ID	Text	C	
Response Code	Text	M	
Receipt ID	Text	C	
Response Text		O	
Transaction Result Data		O	
Credit/Debit Balance Response Data		O	

Reversal

Description

This transaction is used when you want to cancel a transaction. It must occur prior to the next transaction. Typical use if when a response is not received, to make sure nothing was committed a reversal may be sent.

Request Message

Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Processing Code	See above	M	SaleReversal
Stan	Short Number	M	The Stan of the original transaction.

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	SaleReversal
Response Code	Text	M	
Response Text		O	

Credit Balance Inquiry

Description

This transaction will receive the available balance in a prepaid credit card.

Request Message

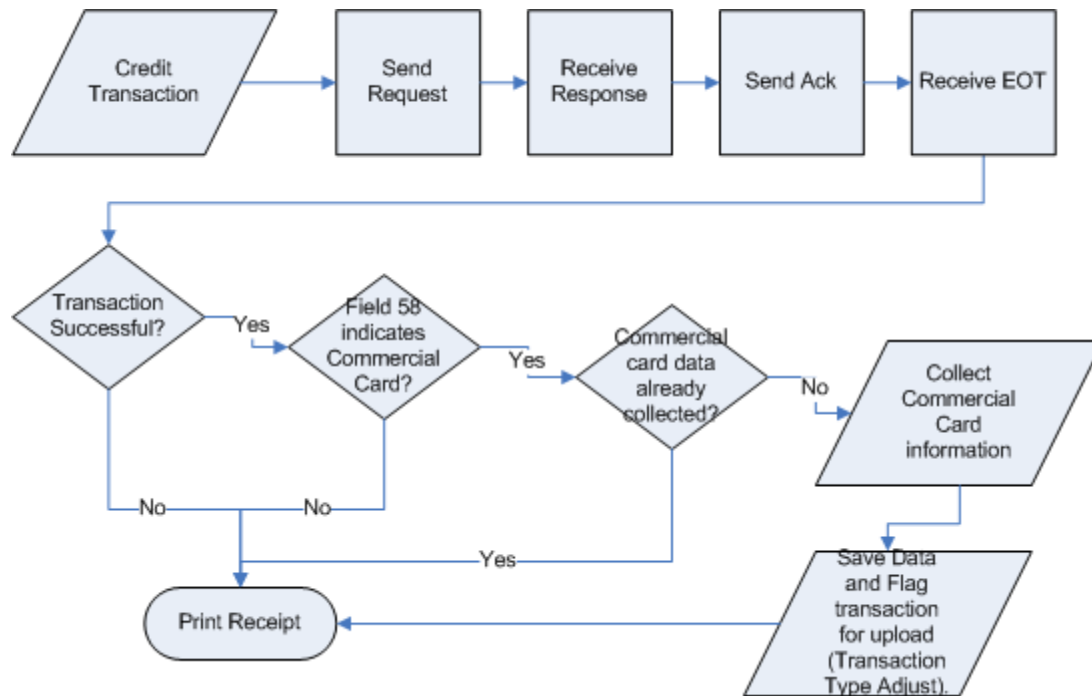
Name	Data Format	Required	Comments
Message Type		M	<i>Request</i>
Version		M	
Account Number	Text	C	Manual transaction only
Processing Code	See above	M	
Stan	Short Number	M	New Stan assigned using standard Stan rules.
Transaction Time	Text	O	
Transaction Date	Text	O	
Expire Date	Text	C	Manual transaction only
Entry Mode Type	See Constant Defs	M	
Entry Mode	See Constant Defs	M	
Track 2 Data	Text	C	Swiped Transaction only
Track 1 Data	Text	C	Swiped and Track 2 N/A
Clerk ID	Text	O	
Invoice Number		O	
Restaurant Information		O	
Reporting Data		O	
Processor Defined Data		C	
UserData		O	
Card Info		C	Contains information about the encrypted card data

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Version		M	
Processing Code	See above	M	
Stan	Short Number	C	
Transaction Time	Text	O	
Transaction Date	Text	O	
RRN	Text	O	
Auth ID	Text	C	
Response Code	Text	M	
Receipt ID	Text	C	
Address Verification Response		O	
Card Verification Response		O	
Transaction Result Data		O	
Response Text		M	
Detailed Response Data		O	Required on receipt if present
Credit/Debit Balance Response Data		O	
Detailed Merchant Response Data		O	Required on merchant receipt if present
Detailed Customer Response Data		O	Required on customer receipt if present

Commercial Card Type Response

This section defines the flow for the case when a credit card does not fall into the terminals defined commercial card bin ranges although it is a commercial card.



- (1) A commercial card type of 0x01, 0x02, 0x03 or 0x0E will be returned in field 58 when the processor detects the card as such.
- (2) If tax information has not yet been gathered it must be collected before the receipt is printed.
- (3) An adjusted transaction must be sent to the server prior to batch, with the newly gathered information as well as the original amount and card data.

ACKNOWLEDGMENT MESSAGE SPECIFICATION

Overview

An acknowledgment message is used to notify the server that the response message has been received by the terminal. The server will respond to the acknowledgment with a response code of zero if the acknowledgement was successful. All other response codes indicate a failure. If a response is not received, the terminal should assume the acknowledgment was not received and fail the transaction.

Message Types

The first two bytes of the authorization message plus the processing code allow the server to determine what type of transaction the server must process.

Type	Message Type
All Online Transactions	Acknowledgment

Request Message

Name	Data Format	Required	Comments
Message Type		M	Request
Processing Code	See above	M	
Stan ¹	Short Number	C	Stan of the transaction being acknowledged.

Response Message

Name	Data Format	Required	Comments
Message Type		M	<i>Response</i>
Processing Code	See above	M	
Stan*	Short Number	C	
Response Code	Text	M	
Response Text		O	

SYSTEM MESSAGE SPECIFICATION

Overview

A ping message is used to verify connectivity to the Apriva system as well as the processor (if supported). In the case of a split dial scenario it will check all split processors

Message Types

The first two bytes of the authorization message plus the processing code allow the server to determine what type of transaction the server must process.

Type	Processing Code
Application Check	ApplicationCheck

Application Check

Description

A ping message is used to verify connectivity to the Apriva system as well as the processor (if supported). In the case of a split dial scenario it will check all split processors

Request Message

Name	Data Format	Required	Comments
Message Type		M	Request
Version		M	
Processing Code	BCD Number	M	
Stan	BCD Number	M	New Stan assigned using standard Stan rules.

Response Message

Name	Data Format	Required	Comments
Message Type		M	Response
Version		M	
Processing Code	BCD Number	M	
Response Code	Buffer	M	

Response Text		M	
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ADDITIONAL TAG SPECIFICATION

Field Definitions

Address Verification

Description: This field is used when address verification data is collected from the card holder.

Tag Format: <AddressVerify>

AVS billing zip code

Description: This is the billing zip code of the customer. It is prompted for during a credit transaction.

Sub Tag Format: <ZipCode>

AVS Billing street address

Description: This is the billing street address or portion of the address of the customer. It is prompted for during a credit transaction.

Sub Tag Format: <Address>

Address Verification Response

Description: This field is used to communicate the response to the address verification data that was provided to the server.

Tag Format: <AddressVerifyResponse>

AVS response code

Description: This is the response character that is received from the processor.

Sub Tag Format: <ResponseCode>

AVS response text

Description: This is the text that corresponds to the character received from the processor.

Sub Tag Format: <ResponseText>

Additional Amounts

Description: This field is used to hold all the information amounts that can be reflected within the total amount of the transaction.

Tag Format: <AdditionalAmounts>

Tip Amount

Description: This is the amount of tip for this transaction. This is available for any transaction that takes tip such as restaurant or retail with tip.

Sub Tag Format: <Tip>

Value Format: Currency

Cash Back Amount

Description: This is the amount of cash back for this transaction. This is available for debit sale and EBT cash benefit sale transactions.

Sub Tag Format: <CashBack>

Value Format: Currency

Fee / Surcharge Amount

Description: This is a fee amount that is part of the total amount.

Sub Tag Format: <FeeOrSurcharge>

Value Format: Currency

Food Amount

Description: This is a food amount that is part of the total amount.

Sub Tag Format: <Food>

Value Format: Currency

Beverage Amount

Description: This is a beverage amount that is part of the total amount.

Sub Tag Format: <Beverage>

Value Format: Currency

Entered Amount

Description: The entered amount is the actual amount of a restaurant transaction prior to tip padding.

Sub Tag Format: <Entered>

Value Format: Currency

Original Authorization Amount

Description: The original authorization amount is the actual authorized amount that was returned to the device as part of the sale request. It is only required at upload in order to recreate the transaction in the case it was lost.

Sub Tag Format: <OriginalAuthorization>

Value Format: Currency

Additional Account Info

Description: This field is used whenever two card numbers must be provided to the processing system.

Tag Format: <AdditionalAccountInfo>

Entry Mode

Description: The way the card information was gathered

Sub Tag Format: <EntryMode>

Entry Mode Type

Description: The type of device used to gather the information

Sub Tag Format: <EntryModeType>

Track 2

Description: This is track 2 data for an additional card when the primary field is in use.

Sub Tag Format: <Track2>

Track 1

Description: This is track 1 data for an additional card when the primary field is in use.

Sub Tag Format: <Track1>

Account Number

Description: This is an account number for an additional card when the primary field is in use.

Sub Tag Format: <AccountNumber>

Expire Date

Description: This is the expiration date for an additional card when the primary field is in use.

Sub Tag Format: <ExpireDate>

Card Info

Description: Complex Type that contains expanded Card Information when the track data is encrypted at the read head.

Tag Format: <CardInfo>

Attribute: Boolean int *IsEncrypted*="n" where *n* being 0 (false) or 1 (true).

Card Data

Description: Complex Type that contains expanded Card Information.

Sub Tag Format: <CardData>

Parent: <CardInfo>

Encrypted Card Data

Description: Complex Type that contains encrypted Card Information.

Sub Tag Format: <EncryptedCardData>

Parent: <CardData>

Data Key ID

Description: Provides the Key ID to use for decryption

Sub Tag Format: <EncryptedCardDataKeyID>

Parent: <EncryptedCardData>

Data KSN

Description: Provides the Key Serial Number

Sub Tag Format: <EncryptedCardDataKsn>

Parent: <EncryptedCardData>

Encrypted Data

Description: Encrypted card data

Sub Tag Format: <EncryptedCardDataEncryptedData>

Parent: <EncryptedCardData>

Encrypted Data

Description: Encrypted card data

Sub Tag Format: <EncryptedCardDataMaskedPAN>

Parent: <EncryptedCardData>

Card Verification

Description: This field is used whenever the Card verification ID CVV or CID is collected from the card.

Tag Format: <CardVerification>

CV Indicator

Description: This field is used for manual transactions to specify if the card is present or not. In the case that CVV is prompted but not entered it will additionally specify why. See constant definitions for possible values.

Sub Tag Format: <Indicator>

CV Value

Description: This field is used for passing the Card Verification Value for a manual transaction and swiped transactions in the case of Discover.

Sub Tag Format: <Value>

Card Verification Response

Description: This field is used to return the response based on the values CV value relayed to the processor.

Tag Format: <CardVerificationResponse>

CV Response Code

Description: This is the response character that is received from the processor.

Sub Tag Format: <ResponseCode>

CV Response Text

Description: This is the text that corresponds to the character received from the processor.

Sub Tag Format: <ResponseText>

Commercial Card Data

Description: This field is used when a card is within the commercial card range and additional information is required.

Tag Format: <CommercialCard>

Customer Code

Description: TBD

Sub Tag Format: <CustomerCode>

Tax Exempt

Description: This defines if the individual is purchasing items without paying tax. See constant definitions for valid values.

Sub Tag Format: <TaxExempt>

Ship to Zip

Description: This is the ship to Zip of the order if applicable.

Sub Tag Format: <ShipToZip>

Duty Amount

Description: This defines the amount of duty charged in this transaction.

Sub Tag Format: <DutyAmount>

Value Format: Currency

Freight Amount

Description: This defines the amount of freight charged in this transaction.

Sub Tag Format: <FreightAmount>

Value Format: Currency

Tax Amount

Description: This defines the amount of tax charged in this transaction.

Sub Tag Format: <TaxAmount>

Value Format: Currency

Credit/Debit Balance Response Data

Description: This field is used when a balance inquiry is run on a prepaid credit card.

Tag Format: <CDBalanceResponseData>

Balance Amount

Description: The available balance on the card

Sub Tag Format: <CDBalanceAmount>

Data Format: Currency

Approved Amount

Description: The approved amount of the transactions

Sub Tag Format: <CDApprovedAmount>

Data Format: Currency

Previous Balance

Description: The previous balance on the card

Sub Tag Format: <CDPreviousBalance>

Data Format: Currency

Available Balance

Description: The available balance on the card

Sub Tag Format: <CDAvailableBalance>

Data Format: Currency

Cash Balance

Description: The amount of cash available on the card

Sub Tag Format: <CDCashBalanceAmount>

Data Format: Currency

Detailed Response Data

Description: This field is used to relay information back to the terminal that the processor would like to show up on the receipt.

Tag Format: <DetailedResponse>

Response Detail

Description: One tag will appear for each line that should be printed on the receipt. The line numbers will start at 1 and increment for each additional tag.

Sub Tag Format: <Detail LineNumber="1">

Detailed Customer Response Data

Description: This defines the lines that need to be printed on only the customer's receipt.

Tag Format: <DetailedCustomerResponse>

Response Detail

Description: One tag will appear for each line that should be printed on the receipt. The line numbers will start at 1 and increment for each additional tag.

Sub Tag Format: <Detail LineNumber="1">

Detailed Merchant Response Data

Description: This defines the lines that need to be printed on only the merchant's receipt.

Tag Format: <DetailedMerchantResponse>

Response Detail

Description: One tag will appear for each line that should be printed on the receipt. The line numbers will start at 1 and increment for each additional tag.

Sub Tag Format: <Detail LineNumber="1">

Invoice Number

Description: The invoice number is used by the merchant to uniquely identify a transaction.

Tag Format: <InvoiceNumber>

MOTO Installment Data

Description: This field is used to pass any information based on recurring transactions for a MOTO transaction

Tag Format: <MotoInstallment>

Total Number of Installments

Description: The total number of times this transaction will occur.

Sub Tag Format: <TotalNumber>

Number of This Installment

Description: The number of this transaction based on the total that will occur.

Sub Tag Format: <ThisNumber>

Order Number

Description: This field is used to pass an order number that may be associated to a MOTO transaction.

Tag Format: <OrderNumber>

Processor Defined Data

Description: Data for these fields may be required depending on the processor. Please check with Apriva for the appropriate data for these fields. Note: When processing through a First Data host, ProcessorData1 must contain the TPPID.

Tag Format: <ProcessorData>

Processor Data 1

Description: This defines data required on a processor by processor basis.

Sub Tag Format: <ProcessorData1>

Processor Data 2

Description: This defines data required on a processor by processor basis.

Sub Tag Format: < ProcessorData2>

Processor Data 3

Description: This defines data required on a processor by processor basis.

Sub Tag Format: < ProcessorData3>

Processor Data 4

Description: This defines data required on a processor by processor basis.

Sub Tag Format: < ProcessorData4>

Processor Data 5

Description: This defines data required on a processor by processor basis.

Sub Tag Format: < ProcessorData5>

Reporting Data

Description: This field is used to send data along with a transaction that is not financial in nature. Any supplied fields will be stored with the transaction for reporting purposes and will not be used to determine the success or failure of the transaction.

Tag Format: <ReportingData>

Reporting Data 1

Description: This defines optional data to be stored with a transaction

Sub Tag Format: <RDetail1>

Reporting Data 2

Description: This defines optional data to be stored with a transaction

Sub Tag Format: <RDetail2>

Reporting Data 3

Description: This defines optional data to be stored with a transaction

Sub Tag Format: <RDetail3>

Reporting Data 4

Description: This defines optional data to be stored with a transaction

Sub Tag Format: <RDetail4>

Reporting Data 5

Description: This defines optional data to be stored with a transaction

Sub Tag Format: <RDetail5>

Report Request Data

Description: This field holds the report request and any information needed to return the report to the terminal.

Tag Format: <ReportRequest>

Report Type

Description: This defines which of the two history reports the user would like to retrieve.

Sub Tag Format: <ReportType>

Characters Per Line

Description: This defines the Number of characters per line that the device can handle.

Sub Tag Format: <CharactersPerLine>

Report Response Data

Description: This field holds any additional information that needs to be sent to the terminal.

Tag Format: <ReportResponse>

Line Number

Description: Which line of detail it is.

Attribute: LineNumber

Detail

Description: Multiple tags that will define each line as it should appear in order.

Sub Tag Format: <Detail LineNumber="1">

Response Text

Description: This field passes back to the device the text corresponding to the result of the transaction.

Tag Format: <ResponseText>

Restaurant Information

Description: This field contains optional fields for the restaurant industry.

Tag Format: <RestaurantInformation>

Table Number

Description: Value assigned to the Table being served

Sub Tag Format: <TableNumber>

Ticket Number

Description: Value used to track the order

Sub Tag Format: <TicketNumber>

Transaction Result Data

Description: This field passes back to the device any information required for this particular transaction by the host at batch time.

Tag Format: <TransactionResult>

PS2000

Description: Transactional information required by the host.

Sub Tag Format: <PS2000>

Transaction Identifier

Description: Transactional information required by the host.

Sub Tag Format: <TransactionIdentifier>

Validation Code

Description: Transactional information required by the host.

Sub Tag Format: <ValidationCode>

User Data

Description: This field passes information on the person running the transaction. This information will be stored along with the transaction but will not be sent to a processor in the transaction.

Tag Format: <UserData>

CONSTANT DEFINITIONS

*Please note that the values listed below are case sensitive.

AVS Enable Options

Name	Value
No AVS	0
AVS Zip Code	1
AVS Address	2
AVS Both	3

Card Type Definitions

Type	Value
Other Unknown	Other
Purchase Card	PurchaseCard
Corporate Card	CorporateCard
Business Card	BusinessCard
Visa	Visa
MasterCard	MasterCard
American Express	AmericanExpress
Discover / Novus	Discover
JCB	JCB
Carte Blanche	CarteBlanche
Debit	Debit
EBT	EBT
Diners Club	Diners
Japanese Airline	JA
Unknown Commercial Card	CommercialCard
Stored Value	StoredValue

Loyalty	Loyalty
Check	Check
Cash	Cash

Card Present Types

Type	Value
Card Present	YES
Card Not Present	NO

CV Presence Indicator

Type	Value
CV NOT PROVIDED	NotProvided
CV VALUE PRESENT	ValuePresent
CV VALUE PRESENT BUT ILLEGIBLE	ValueIllegible
CV NOT PRESENT	NotPresent

CV Enable Options

Name	Value
NO CV (never prompt)	0
Manual Card Not Present Only	1
Manual Only	2
Required	3

EDC Types

Type	Value
Credit	1
Debit	2
EBT	3
Check	4



Stored Value (Gift)	5
Loyalty	6
Cash	7

Entry Mode

Type	Value
Standard/ Contactless / Smart Card Devices	
Manual	Manual
Track 1	Track1
Track 2	Track2
Micr Reader / Check Imaging Device	
Keyed	Keyed
MICR Reader	Micr

Entry Mode Type

Type	Value
Standard	Standard
MICR Reader	Micr
Check Imaging Device	CheckImaging
Contactless	Contactless
Contactless w/ RFID (PayPass)	PayPass
Smart Card Chip Card	SmartChipCard
Smart Card Non-Chip Card	SmartNonChipCard

POS Condition Code (Order Type)

Type	Industry	Value
Mail/Telephone (aka: Single Purchase Transaction)	MOTO	1
Recurring Transaction	MOTO	2
Installment Transaction	MOTO	3

Unclassified Transaction	MOTO	4
Secure Electronic Commerce transaction	SET	5
Non-authenticated security transaction at a 3-D secure-capable merchant	SET	6
Non-authenticated security transaction	SET	7
Non-secure transaction	SET	8
Open Tab (Restaurant)	RESTAURANT	51

Processor Types

Name	Value
TSys	4
FDMS CARDNet	5
Nova	6
FDMS South	7
Paymentech	9
FDMS Nashville	11
APRIVA Test Processor	12
Fifth Third	13
Global East	16
Paymentech	17
Paymentech	18
FDMS Omaha ETC	21
Open Solutions	22
American Express	23
Alliance Data Systems	25
Jetpay	26
Valutec	27

GiveX	31
World Gift	32
TPS	33
FDMS Atlanta	34
ECA	35
Crosscheck	38
Certegy	39
First National	40
Element	41
Stored Value Systems	42
Opticard	45
FDMS Nashville ISO Dual	46
Tender Card	48
Global East ISO	51
RBS World Pay	53
AquaFill	54
Data Shapers	56
Heartland	57
SparkBase	58
Gator Card	61

Prompt Types

Name	Value
Disabled	0
Manual Only	1
Manual and Swipe	2

Report Types

Type	Value
Report Type 1	1
Report Type 2	2
Report Type 3	3
Report Type 4	4
Atlanta	
Current Daily Totals	1
Most Recent Active Date Totals	2
Second Most Recent Active Date Totals	3
Third Most Recent Active Date Totals	4

Response Code (Transaction)

Type	Value
Success	00 or 0
Failed (Anything other than 0 depending on processor)	XX

Response Code (Batch)

Type	Value
Success	00
Failed (Anything other than 0, 59, or 95 depending on processor)	XX
Batch Processing, waiting for Processor Response	59
Batch Totals Mismatch	95

Tax Exempt

Type	Value
Tax amount entered	Yes
No tax amount entered and answered yes to Tax Exempt prompt	No

Transaction ID

Cash

Name	Value
Sale	40
Refund	41

Check

Name	Value
Verification	25
Conversion	26
Guarantee	27
Record	99

Credit

Name	Value
Sale	1
Authorization Only	2
Refund	3
Offline Sale (Force)	4
Post Auth	85

Debit

Name	Value
Sale	13
Refund	14
Key Exchange	65

EBT

Name	Value
------	-------

Sale	17
Voucher Sale	18
Refund	19
Voucher Refund	20
Cash Sale	21
Food Stamp Balance	22
Cash Balance	23

Loyalty

Name	Value
Issue	36
Add Value	33
Redemption	35
Deactivation	38
Replacement	39
Balance Inquire	34

Stored Value

Name	Value
Redemption	42
Pre Authorization	43
Completion	44
Balance Inquire	45
Activation	46
Block	47
Re-Activation	48
Issue	49

Issue Virtual	50
Add Value	51
Return	52
Forced Redemption	53
Forced Add Value	54
Forced Activation	55
Cash Out	59
Deactivation	60
Balance Transfer	61
Balance Adjustment	62
Balance Merge	68
Lost or Stolen	81
Set Reference	82

Transaction Type

Type	Value
Credit Card Sale transaction	CreditSale
Credit Card Refund transaction	CreditRefund
Debit Card transaction	Debit
EBT transaction	EBT
Check transaction	Check
Cash transaction	Cash
Stored Value transaction	StoredValue
Loyalty transaction	Loyalty

APPENDIX A - APRIVA CERTIFICATION INFORMATION

Overview

APRIVA is a gateway to many different processor systems. In order to assist in the testing of this messaging API's implementation, the following information should be helpful.

Information Needed For Setup

- * APRIVA needs to be provided with the unique identifier that is to be used to identify the terminal. For example, the hardware serial number of the device can be used. This will be used to add the device in the APRIVA control panel.
- * If a specific processor is to be used for testing, merchant and terminal information will need to be configured server side using our control panel.
- * Any host connectivity information can be obtained for Cingular Data, Motient Data or Verizon CDMA. We have alpha, beta and production level information so depending on the stage of testing the appropriate connectivity information will be provided.

Test Processor Interface

General

Any transaction for \$0.56, \$5.62 or \$1000.56 –

The transaction will be successful however the Acknowledgment will fail. This will mimic the loss of coverage at time of ACK.

Any transaction for \$1.47 or between \$125.01 and \$130.00

The transaction will approve with a response text of "".

Any transaction for \$8.05 or between \$85.01 and \$90.00–

This transaction will be successful with an auth code of length 3.

Any transaction that is not \$8.24 or is between \$120.01 and \$125.00

The transaction will approve with the response text of "Hard Coded Success".

Any transaction for \$8.23 or between \$110.01 and \$ 115.00 –

This transaction will be successful with a response text of "Yahoo!".

Any transaction for less than or equal to \$9.03 or \$1000.56 or between \$20.00 and \$165.00

This transaction will be successful with an auth code of length 6 for message version less than 4.0. All other message versions will return an auth code of length 10. The response text will be "Hard Coded Success". Unless otherwise stated by other amounts.

Any transaction equal to or between \$9.04 and \$19.99 and \$175.01 and up –

This transaction will fail with a response text of "Declined" and response code of "1" unless otherwise stated by other amounts.

Any transaction for \$9.01 or between \$25.01 and \$30.00 –

The transaction will sleep for a total of 180 seconds forcing a timeout.

Any transaction for \$9.00 or between \$30.01 and \$35.00 –

The transaction will sleep for a total of 60 seconds before returning.

Any transaction for \$9.02 or between \$20.00 and \$25.00 –

The transaction will sleep for a total of 60 seconds before returning.

Any transaction for \$9.03 or between \$115.01 and \$120.00 –

The transaction will not approve with a response code of "123" and a response text of "3 Digit Response Code".

Any transaction for \$8.98 or between \$35.01 and \$40.00 –

The transaction will sleep for a total of 15 seconds before returning.

Any transaction for \$9.50 –

This transaction returns the response text of "No Response Code"

Any transaction for \$10.01 –

This transaction will fail with the response text of "Referred to card issuer" and response code of "1".

Any transaction for \$10.02 –

This transaction will fail with the response text of "Special referred to card issuer" and response code of "2".

Any transaction for \$10.03 –

This transaction will fail with the response text of "Invalid Processing Code" and response code of "3".

Any transaction for \$10.12 –

This transaction will fail with the response text of "Invalid Message Type" and response code of "12".

Any transaction for \$10.13 –

This transaction will fail with the response text of "Invalid Amount" and response code of "13".

Any transaction for \$10.14 –

This transaction will fail with the response text of "Unauthorized Card Number" and response code of "14".

Any transaction for \$10.19 –

This transaction will fail with the response text of "Miscellaneous Data Error" and response code of "19".

Any transaction for \$10.25 –

This transaction will fail with the response text of "Invalid Terminal ID" and response code of "25".

Any transaction for \$10.30 –

This transaction will fail with the response text of "Format Error" and response code of "30".

Any transaction for \$10.50 –

This transaction will fail with the response text of "You Must Be Crazy" and response code of "50".

Any transaction for \$10.51 –

This transaction will fail with the response text of "Declined" and response code of "51".

Any transaction for \$10.54 –

This transaction will fail with the response text of "Expired Card" and response code of "54".

Any transaction for \$10.58 –

This transaction will fail with the response text of "Invalid Transaction" and response code of "58".

Any transaction for \$10.74 –

This transaction will fail with the response text of "Retry" and response code of "74".

Any transaction for \$10.76 –

This transaction will fail with the response text of "Invalid Product Code" and response code of "76".

Any transaction for \$10.77 –

This transaction will fail with the response text of "Reconcile Error" and response code of "77".

Any transaction for \$10.89 –

This transaction will fail with the response text of "Terminal Record Locked" and response code of "89".

Any transaction for \$10.91 –

This transaction will fail with the response text of "Call Voice Center" and response code of "91".

Any transaction for \$10.94 –

This transaction will fail with the response text of "Duplicate Transmission" and response code of "94".

Any transaction for \$10.95 –

This transaction will fail with the response text of "Batch Upload in Progress" and response code of "95".

Any transaction for \$10.96 –

This transaction will fail with the response text of "Processing Error" and response code of "96".

Any transaction for \$15.42 (V3.2)-

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.

"Failed Transaction. If you run a transaction for less than 9.00 it will be successful."

Any transaction between \$95.01 and \$100.00

Transaction will use original RRN.

Any transaction for \$7.50 or between \$105.01 and \$110.00

The transaction will approve and return the following:

Report Receipt Lines: 4|261101604041 |4

Response Timestamp: <current Time>

PS2000 Data: N007130614018495XWZ6 000

A Post Auth or a Force for \$7.12

Transaction will use original RRN.

Merchant Number equal to "Success" -

All transactions will succeed.

Merchant Number equal to "Fail" -

All transaction amounts will fail with a response text of "Failure" and response code of "99".

Merchant Number equal to "DelayMerchant" -

All sale transactions for less than \$3.00 will sleep for the amount of the transaction. For example, an amount of \$1.00 will cause the application to sleep for 100 seconds. Transactions greater than \$3.00 will process as usual with no delays.

Merchant Number equal to "Nashville" and Country is "Canada"-

All debit sale and refunds for \$2.51 or between \$50.01 and \$55.00 will return the following Interac Canadian Nashville keys:

5489632514569875
1234588568458446
6285022333358298

Credit

Any MasterCard transaction for \$7.50 or between \$105.01 and \$110.00

The transaction will approve and return the following:

Report Receipt Lines: 4|261101604041 |4

Response Timestamp: <current Time>

PS2000 Data: 0MPLY8DQN0510

Any credit sale for \$8.99 or between \$40.01 and \$45.00-

The transaction will return a card type of unknown commercial card (14). The terminal should prompt for customer code and tax amount.

AVS zip code of "85251" and address of "6900" -

AVS response code will be "Y" with text of "Both Match".

AVS zip code of "85251" and address of "852512431" -

AVS response code will be "Z" with text of "Zip Match".

AVS address of "6900" -

AVS response code will be "B" with text of "Address Match".

AVS zip code of "11111" -

AVS response code will be "1" with text of "Unsupported".

AVS zip code of "87000" -

AVS response code will be "0" with text of "Address Not Verified".

AVS zip code of "87001" -

AVS response code will be "A" with text of "Address Match, Zip No Match".

AVS zip code of "87002" -

AVS response code will be "B" with text of "Address Match, Zip No Match".

AVS zip code of "87003" -

AVS response code will be "C" with text of "Address Match, Zip No Match".

AVS zip code of "87004" –

AVS response code will be "D" with text of "Address Match, Zip Match".

AVS zip code of "87005" –

AVS response code will be "E" with text of "Error Response for MCC Code".

AVS zip code of "87006" –

AVS response code will be "F" with text of "Address and Postal Code match for U.K. only".

AVS zip code of "87007" –

AVS response code will be "G" with text of "Int. Issuer Addr info not verified".

AVS zip code of "87008" –

AVS response code will be "I" with text of "Address Not Verified".

AVS zip code of "87009" –

AVS response code will be "M" with text of "Address Match, Zip Match".

AVS zip code of "87010" –

AVS response code will be "N" with text of "Address No Match".

AVS zip code of "87011" –

AVS response code will be "P" with text of "Unknown Address code, Zip Match".

AVS zip code of "87012" –

AVS response code will be "R" with text of "Retry, system unavailable".

AVS zip code of "87013" –

AVS response code will be "S" with text of "Not Applicable".

AVS zip code of "87014" –

AVS response code will be "U" with text of "Address Not Verified".

AVS zip code of "87015" –

AVS response code will be "W" with text of "Not Applicable".

AVS zip code of "87016" –

AVS response code will be "X" with text of "Not Applicable".

AVS zip code of "87017" –

AVS response code will be "Y" with text of "Address Match, Zip Match".

AVS zip code of "87018" –

AVS response code will be "Z" with text of "Address No Match, Zip Match".

All other AVS zip code and addresses –

AVS response code will be "N" with text of "No Match".

CVV value of "999" –

CVV response code will be "M" with text of "Match".

CVV value of "998" –

CVV response code will be "N" with text of "No Match".

All other CVV values –

CVV response code will be "X" with text of "Unsupported".

Debit

Any successful transaction –

Transactions will return the following if not noted elsewhere to the contrary:

- Processing Card Type of "028"
- Processing Net Name of "PULSE"
- Debit Receipt Number of "12345"

EBT

Any transaction for \$8.97 or between \$55.01 and \$60.00–

A balance amount of \$333.00 will be returned.

Any successful transaction –

A balance amount of \$2.05 will be returned if not noted elsewhere to the contrary.

Check

Any successful transaction –

Transactions will return the following if not noted elsewhere to the contrary:

- Check number same as received
- Return check fee of \$25.00
- Capture Image set to 1
- Billing Control Number of "437"
- Trace ID same as the sent stan

Check transaction for \$2.50 or between \$135.01 and \$140.00 (V3.2) -

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.

"When you provide a check as payment, you authorize us to use information from your check to process a one-time Electronic Funds Transfer (EFT) or draft drawn from your account, or process the payment as a check transaction. You also authorize us to process credit adjustments, if applicable. If your payment is returned unpaid, you authorize us to collect your payment and the Return Fee amount by EFT(s) or draft(s) from your account. If you are presenting a corporate check, you make these representations as an authorized corporate representative and agree that the corporation will be bound by the NACHA rules. Questions? Call us at (800) 123-4567."

Check transaction for \$2.52 or between \$135.01 and \$140.00

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.



"We are happy that we are able to accept your check at this time. The decision to accept your check was influenced by information in a consumer report provided, at our request, by Apriva Test Check Services Inc. (ATCS) P.O. Box 12345 Scottsdale, AZ 85555 1-800-123-4567 extension 1. You may obtain a free copy of the consumer information in ATCS files within 60 days of your receipt of this notice by providing, along with your request, your full name, driver's license number and the state of issuance, date of decline, the dollar amount of the transaction, the merchant where you presented your check and your day time phone number including area code. ATCS did make the decision to accept your check but is unable to provide you with the specific reasons why your check was accepted. You also have the right to agree with Apriva Test the accuracy or completeness of any information contained in their files."

Check transaction for \$11.75 (V3.2) –

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.

"We apologize for not accepting your check. We value your business and regret the inconvenience. Our decision was based in part on information provided by our check processor. Our check processor provides authentication and risk management services to merchants and businesses nationwide. For more information, call APRIVA toll free at 1-800-123-4567 or write to APRIVA, Post Office Box 1, Scottsdale, AZ 12345."

Check transaction for \$6.27 or between \$145.01 and \$150.00(V3.2) –

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.

"Successful transaction. Thank you for your thorough testing and please keep up the good work."

Check transaction for \$6.28 or between \$150.01 and \$155.00(V3.2) –

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.

"Successful transaction. Thank you for being our customer. We value your business."

Check transaction for \$6.29 or between \$155.01 and \$160.00(V3.2) –

The following lines of text are sent back in a field 63 and should be printed above the footer on the receipt.

"Successful transaction. Be sure to thank the customer and save this receipt."

Stored Value

Any transaction for \$8.96 or between \$45.01 and \$50.00(V3.2) –

A lock amount of \$8.88 and a returned expiration date of "100208" will be returned.

Any successful transaction –

Transactions will return the following if not noted elsewhere to the contrary:

Previous Balance of \$500.00

Balance amount of \$8.00

Approved Amount same as the Original Amount

Any transaction for \$8.96 or between \$45.01 and \$50.00(V3.2) –

A lock amount of \$8.88 and a returned expiration date of "100208" will be returned.

Deactivation transaction with Refund Balance set to true-

Transactions will return an approved amount of \$56.89.

Redemption transaction for \$0.00-

Transactions will redeem the entire amount on the card and return the following.

Previous Balance is \$28.00

Approved Amount is \$28.00

Balance Amount = \$0.00

Redemption transaction for \$8.27 or between \$60.01 and \$65.00-

Transactions will partially approve the amount on the card and return the following.

Previous Balance is \$7.00

Approved Amount is \$7.00

Balance Amount = \$0.00

Amount = \$7.00

Cash Out transaction for \$8.28 or between \$65.01 and \$70.00-

Transactions will return the following if not noted elsewhere to the contrary:

Previous Balance will be \$20.00

Approved amount will be \$20.00

Balance amount will be \$0.00

Cash Out transaction for \$8.29 or between \$70.01 and \$75.00-

This is used to perform a partial approval (the balance on the card is less than the amount requested).

Previous Balance will be \$8.00

Approved Balance will be \$8.00

Balance Amount will be \$0.00

Pre Auth transaction-

Transactions will return an unlock ID of 9977.

Issue Virtual transaction-

Transactions will return a card number of 4012000033330026.

Cash Out transaction for \$0.00 or between \$75.01 and \$80.00-

Transactions will approve return the following.

Previous Balance is \$7.50

Approved Amount is \$7.50

Balance Amount = \$0.00

Amount = \$7.50

Loyalty

Any transaction for \$8.96 or between \$45.01 and \$50.00(V3.2) –

A lock amount of \$8.88 and a returned expiration date of "100208" will be returned.

Any successful transaction –

Transactions will return the following if not noted elsewhere to the contrary:

Points balance of 125

Loyalty Level of 3

Any transaction for \$1.00 or more including (\$80.01 - \$85.00)–

Transactions will return the following if not noted elsewhere to the contrary:

Points Added of ((Amount * 100) – 100)

Loyalty transaction for \$8.96 or between \$45.01 and \$50.00(V3.2) –

A lock amount of \$8.88 and a returned expiration date of "100208" will be returned.

Settlement

Any transaction for \$6.37-

The transaction will fail at batch and be returned in the error stans field.

Any transaction for \$0.08 or \$1000.08 or between \$160.01 and \$165.00 -

Batch will delay for 8 seconds for each transaction with these amounts. It will then complete successfully.

Any transaction for \$0.09 or \$1000.09 or between \$165.01 and \$170.00 -

Batch will delay for 60 seconds for each transaction with these amounts. It will then complete successfully.

Any transaction for \$0.10 or \$1000.10 -

Batch will delay for 3 minutes for each transaction with these amounts. It will then complete successfully.

A batch credit total of \$1.09 or \$100.00 –

Batch will fail with error response text of "No Response Code".

A batch credit total of \$1.10 or \$200.00 –

Batch will fail with error response text of "Batch Failed".

A batch credit total of \$1.11 or \$300.00 –

Batch will fail with error response text of "Batch Failed with 3 digit RC" and a response code of "123".

A batch credit total of \$1.12 or \$400.00 –

Batch will fail with error response text of "BatchUnresolved".

A batch credit total of \$8.23 or \$500.00 –

Batch will settle with response text of "You Rock!"

A batch credit total of \$4.23 or \$600.00 –

Batch will settle with response text of "Duplicate Batch" and response code of "QD".

A batch ECA total of \$2.64 –

Batch will fail with error response text of "Batch Failed".

Merchant Number equal to "Success" –

Batch will be successful with response text of "Automatic Success".

Merchant Number equal to "Fail" –

Batch will fail with a response code of "1" and response text of "Automatic Failure".

Other

An Application Check Message –

If the PNI is running it will return success and text "PNITest is healthy"

A Key Exchange Message with merchant number set to "Nashville" and country set to Canada –

Returns "Hard Coded Success" with the following keys:

MAC – "3285738294858291"

Key 1 – "5489632514569875"

Key 2 – "1234588568458446"

Key 3 – "3285738294858291"

A Key Exchange Message –

Returns "Hard Coded Success" but no new keys

A Reversal Message for 2.38 –

Reversal will fail with text "Reversal Failed"

A Reversal Message for anything other than 2.38 –

Reversal will be successful with text "Hard Coded Success".

A Report Message for Report Type 1 –

The following lines of text are returned and need to be printed.

CC 2 \$3.50

TE 1 \$2.00

DS 0 \$0.00

DB 10 \$95.78

CK 2 \$2.00

AO 15 \$65.00

EF 0 \$0.00

EC 2 \$56.98

SV1 1 \$5.00

SV2 23 \$565.12

SV3 0 \$0.00

SV4 8 \$34.00

A Report Message for Report Type 2 –

The following lines of text are returned and need to be printed.

CC 0 \$0.00
TE 1 \$2.00
DS 0 \$0.00
DB 25 \$8795.78
CK 0 \$0.00
AO 0 \$0.00
EF 0 \$0.00
EC 0 \$0.0
SV1 0 \$0.00
SV2 0 \$0.0
V3 0 \$0.00
SV4 0 \$0.00

A Report Message for Report Type 3 –

The following lines of text are returned and need to be printed.

CC 0 \$0.00
TE 0 \$0.00
DS 0 \$0.00
DB 0 \$0.00
CK 0 \$0.00
AO 0 \$0.00
EF 0 \$0.00
EC 0 \$0.00
SV1 1 \$5.00
SV2 23 \$565.12
SV3 0 \$0.00
SV4 8 \$34.00

A Report Message for Report Type 4 –

The following lines of text are returned and need to be printed.

CC 600 \$3000.00
TE 0 \$0.00
DS 0 \$0.00
DB 0 \$0.00
CK 0 \$0.00
AO 0 \$0.00
EF 0 \$0.00
EC 0 \$0.00

SV1 0 \$0.00
SV2 0 \$0.00
SV3 0 \$0.00
SV4 0 \$0.00