Payment API

Version 2.2.8

Confidential

TABLE OF CONTENTS

Change Request Reference

Change Request (CR) Number(s):	
CR Submitter(s):	
Date of CR Submission to:	

Document Summary

Document Title:	CMT – Payment API
Owner:	Creative Mobile Technologies
Status:	(*check one box*) ☐ DRAFT ■ Approved
Template Version:	1.1

Document Change History

Date of Change	Version	Reason for Change	Summary of Change	Build #	Author
Jun, 10, 2011	1.0		Payment API created	1.0	J. Backof
June 20, 2011	1.1		Added additional Level 2/3 Fields		J. Backof
August 2, 2011	1.2		Updated encryption algorithms, enc. Token and format for expiration date		J. Backof
August 5, 2001	1.3		Removed Error Code 9 From all transaction types		J. Backof
September 5, 2011	1.4		Added Transaction Type “M” – Offline Sale to authorizations. Also added Authorization Code for transaction type “M” Updated user_id to employee_id and made it a String value to allow for more flexible employee numbers.		J. Backof
November 20, 2011	1.5		Added decline scenarios.		J. Backof
April 3, 2012	2.0.0		Updated services schema to accommodate for level 2 and 3 data capture. Renamed methods to reduce confusion. Added optional service data for linkage to CMT’s FleetNet Portal.		J. Golden/ J. Backof

September 17, 2012	2.0.1		Added more descriptive text around REST Calls		J. Backof
October 19, 2012	2.0.2		Included additional fields for CabConnect card processing. Included Test card data.		J. Golden
December 5, 2012	2.0.3		Correct URLs and updated OAuth section		J. Golden
February 14, 2013	2.0.4		Included truncated account number and expiration date for auth and capture responses		J. Golden
April 4, 2013	2.0.5		Included CVV and Zip Code for Token request as well as additional response codes		J. Golden
August 13, 2013	2.1.3		Streamline error codes and format, remove COF token update, remove Device Capture, added section headers		S. Selikoff
September 11, 2013	2.1.6		Updated examples from XML to JSON		S. Selikoff
October 23, 2013	2.2.3		Added authorizationCode to Capture Response message		S. Selikoff
November 11, 2013	2.2.4		Correct JSON sample messages		S. Selikoff
March 25, 2014	2.2.8		Added support for CBord authorizations		S. Selikoff

Overview

Creative Mobile Technologies has developed a RESTful API to allow developers to programmatically interface with our payment processing infrastructure. All resources use JSON payloads over secure http (port 443) and are currently available to authorized CMT customers with valid merchant accounts.

Document Usage

This document was designed to be used by developers to wish to integrate with CMT's payment processing infrastructure. A basic understanding of RESTful services, JSON and communications over HTTP are required.

General Information

Amounts

Amounts do not include cents nor thousands delimiters. For a $1,017.65 amount, 101765 is sent and the last 2 digits are assumed to be cents. All amounts are assumed to be in the currency code specified in the request. If a currency code is not given, USD is assumed to be the currency.

Country Codes

The country codes used are from the standard ISO 3166-1 alpha-2 specification. Please see Appendix B for supported countries or contact CMT to ensure the country is supported.

Currency Codes

The currency codes used are from the standard ISO 4217 Currency Codes. Please see Appendix B for supported currencies or contact CMT to ensure the currency is supported.

Distances

All distances are in *kilometers* unless otherwise specified.

Dates/Times

All optional dates should be passed in as the ISO 8601 date format, YYYY-MM-DDTHH:mm:ss+ UTC Offset. (eg. 2012-07-16T13:24:00+0000 is 1:24 pm on July 16, 2012 UTC).

Duplicate transaction checking

CMT supports checking for duplicate transactions. When configured, CMT will validate that the combination of transaction type, customer reference number, transaction amount and last 4 of the credit card number are not repeated within the last 5 minutes. If repeated transaction(s) are sent, the transactions that are deemed duplicate will not be sent onto the bank. NOTE: The new transactions will only be checked against transactions that were approved or partially approved.

API Summary

CMT's Payment API is a RESTful service providing developers access to process credit, debit and private label cards through CMT's payment processing infrastructure.

CMT supports the following card types:

- Major Credit Cards (Visa, MasterCard, Discover, JCB, Diners, American Express)
- Pin-less Debit
- Certain Private Label Cards (contact CMT)
- Certain University Cards (contact CMT)

This API provides methods to authorize cards by passing track II swipe data (for programmatic interfaces with card readers) or account numbers and expiry dates as in the case of manual or card not present environments.

HTTP Response Codes

The following table lists the possible http response codes returned by the CMT Platform API and their corresponding description.

Code	Description
200	Request processed successfully. Check response codes for additional status indicators.
400	Bad request. Includes validation errors, bad JSON.
401	Unauthorized. The response code is returned if: - OAuth authentication failure - Session timeout (if session is supported)
403	Forbidden. Customers will receive this response code if they try to access a method without proper authorization.
500	Server Error. Retry request or contact CMT.

Authentication

Introduction

Each request to the CMT Payment API requires authentication. CMT employs a signature authentication strategy based on oauth 1.0a.

Authentication

To authenticate to the CMT Payment API, implement or download a client based on oauth 1.0a. More information on oauth can be found at http://oauth.net and for information or third party resources and libraries, visit:

http://oauth.net
http://oauth.net/code/
http://hueniverse.com/oauth/guide/authentication/

Once your oauth client is in place, you will be provided an oauth consumer key and oauth consumer secret key. Please do not share your secret key with anyone and obfuscate any reference to this key in your libraries.

Field	Description
OAuth Consumer Key	Unique key which grants developers access to specific resources and fleets.
OAuth Consumer Secret Key	Private key issued to developers which is used in the hashing algorithm. See below.

Sample Header

Below is a sample header request for a Payment API oauth request.

```
request: merchants/97b8ef25bc064bbb9eaf0e75858f5c73/authorize
Accept:[application/json]
Authorization:[OAuth oauth_consumer_key="api-consumer-1", oauth_nonce="-
2277426177509978136", oauth_signature="5PICyq0XvXbwS2FvlAvMetaTxM0%3D",
oauth_signature_method="HMAC-SHA1", oauth_timestamp="1352825875",
oauth_version="1.0"]
Content-Type:[application/json]
```

Merchant Token

After opening an account through CMT, each fleet will be provided with one or more merchant tokens. These tokens are specific to a merchant account and provide access to debit and credit those accounts.

Card on File Token

The previously establishing pairing token for an existing card on file.

Safeguarding Information

In order to ensure the security and safety of cardholder data, CMT strongly suggests storing API keys, secret keys and merchant tokens encrypted. Never share these keys/tokens with anyone.

Payment API Resources

I. Authorize Resource

The ***Authorize*** resource provides an interface to authorize credit card sales, pre-authorizations and credits. The ***Authorize*** resource takes as input either track II data or an account number/expiration date. Please see the field list below for a detailed description of the input parameters including types, length and if the field is optional.

II. Capture Resource

For pre-authorized transactions, it is necessary to perform a delayed capture. The ***Capture*** resource provides this interface. Authorized transactions will return a transaction ID which must be used when calling the ***Capture*** resource. If a capture is not sent, the pre-authorization will expire after 3 days and the transaction will have to be re-authorized.

III. Reverse Resource

The ***Reverse*** resource provides developers the ability to void or cancel authorizations. Please note that reversals are only available for pre-authorizations. Credits should be issued against sale or captured transactions.

IV. Tokenize Resource

The ***Tokenize*** resource provides developers the ability to create a token in place of cardholder data, update tokenized data and delete a token. The token does not use the cardholder data to create the token so there is no way to get the cardholder information with just the token alone.

I. Authorization Resource

Summary

Several transaction types are available for authorizations including sales, credits, pre-authorizations, and voice authorizations depending on the business requirements.

Transaction Types

Sale

A Sale (transactionType=S) should be used if there is only one final transaction and the money should be collected immediately. Once CMT receives the transaction, it is immediately marked and will be settled on the next settlement cycle. No further action is necessary.

Pre-Authorization

Pre-authorizations (transactionType=P) should be used to put a hold on money until services are rendered. Once rendered, a Capture command (see below) should be called to release the hold and settle the funds. Please note that the time between authorization and capture can impact interchange rates. Please contact CMT for more details and best practices.

Voice Authorization

Occasionally, transactions cannot be completed via our services (Referral transactions or high dollar amounts). Customers will have to obtain bank approval via telephone. Once the authorization is obtained, the transaction can be sent through our web services as a Voice Authorization transaction (transactionType=M). Please note that authorization code is required for voice authorized transactions. Once the transaction is sent, it will be settled similar to a Sale. No further action will be necessary. Please contact CMT to learn more about how voice authorization work.

Credit

Credits can be issued through the CMT Transaction Service by specifying the transaction type of "Credit" (transactionType=C).

Additional/Optional Data

CMT supports optional data fields to support Purchase Card Level 2 and Level 3 data information as well as service data for other CMT services (trip sheet collection and reporting).

Level 2/3 Data

CMT supports passing Purchasing Card Level 2 information (such as purchase order number, tax amount, and postal codes, etc…). CMT Also supports Level 3 data and line item records which include line item details for purchases. See the description below as not card types support all fields.

AVS/CVV2 Verification

CMT supports address and card verification services. When configured, CMT will validate AVS and/or CVV2 data if passed. Please contact CMT to activate this service.

	Resource	Description
A.	POST merchants/:merchantToken/authorize	Provides access to create authorizations, pre-authorizations, credits, and voice authorizations using merchant information.

A. POST merchants/:merchantToken/authorize

This resource is designed to authorize credit cards by passing track II (mag stripe) or account number/expire date. The resource supports transactions of type: authorization, pre-authorization, credit, and voice authorization.

Merchant Authorize Resource URLs

Production: https://payment.cmtapi.com/v2/merchants/:merchantToken/authorize

Sandbox: https://payment-sandbox.cmtapi.com/v2/merchants/:merchantToken/authorize

Merchant Authorize Parameters

merchantToken (required) - See Merchant Token

If the event that the response sub-code is HTTP 400 indicating an error, then only two fields, responseCode and responseMessage, will be returned.

URL Parameters

Field	DataType	Size	Required	Notes
:merchantToken	String		x	The unique merchant token for the fleet's request

Request Field Description

Field	Type	Max Len	Required	Notes
transactionType	String	1	x	One of the following four single-character values: **S** : Sale **P** : Pre-authorization **C** : Credit **M** : Offline Sale (Voice Authorization)
amount	Integer		x	Amount to authorize in cents. See Amounts for format.
cardReaderMethod	Integer		x	One of the following for 3 integer values: **0** : Swipe **1** : RFID Tap **2** : Manual (keypad)
encryptionKeyVersion	Integer			Version of the key used in the encryption.
encryptedToken	String	20		SEND "CMT_PAYNET" Encrypted (if encryption algorithm is not 0)
encryptionAlgorithm	Integer			One of the following 2 integer values: **0** : None **1** : 3DES
currencyCode	String	3		Defaults to **USD** if blank. See ISO 4217 Currency Codes spec for values.
customerReferenceNumber	String	50		Unique customer reference number. Used for duplicate transaction checking. Returned on response
deviceName	String	50		Unique device or terminal id
employeeId	String	100		Driver or employee id
authorizationCode	String	10	x (if Transaction Type is M)	Populate with authorization code received from manual authorization (voice).
track2Data	String	200	x	Only required if Account Number or Card on File token is not passed. Encrypted.
accountNumber	String	200	x	Only required if track2Data or card on file token is not passed. Encrypted.

expirationDate	String	10		YYMM Format. May be required based on card type.
zipCode	String	10		Either the 5 digit or 9 digit representation
cvv2	String	8		Credit verification value
transactionDate	String			Defaults to current date and time if left blank. See ISO 8601 spec for formatting.
cardOnFileToken	String	100	x	Retrieves the card holder data based on the token. Only required if account number/expiration date or track2data is not passed.
saveCardOnFile	Char	1		If set, the card data will be saved for future processing. The cardOnFileToken will be returned in the response. One of the following two values: **Y** : indicates save the card on file **N** : (default) does not save the card on file
institution	String	50		Optional parameter for CBord authorization request. One of the following for 4 String values: **BOSTON_U** **EMERSON** **NORTHEASTERN** **SUFFOLK**
Level 2 Data (L2Data)				
purchaseCode	String	16		Used for American Express, Visa and Mastercard. Only first 10 characters are sent to American Express
destinationPostalCode	String	10		Only applicable for Visa, Mastercard and American Express (Only first 6 characters are sent to American Express)
destinationCountry	String	2		Only applicable for Visa and Mastercard. See ISO 3166-1 alpha-2 spec for values
sourcePostalCode	String	10		Used for American Express, Visa and Mastercard. Only first 6 characters are sent to American Express
salesTax	Integer			See Amounts for format.
Level 3 Data (L3Data)				
purchaseOrderNumber	String	16		Item's purchase order number
orderDate	Date			Purchase date. See ISO 8601 spec for formatting.
alternateTaxAmount	Integer			Total alternate tax for all the items in the purchase. See Amounts for format.
discountAmount	Integer			Total discount amount for all items in the purchase. See Amounts for format.
freightAmount	Integer			Total freight for all items in the purchase. See Amounts for format.
dutyAmount	Integer			Total duty amount for all items in the purchase. See Amounts for format.
taxExemptIndicator	Char	1		Indicates whether or not the purchase is tax exempt **Y** : purchase is tax exempt **N** : purchase is not tax exempt
List of Level 2/3 Items (L23Item)				CMT supports up to 4 Level 2/3 Item Records
description	String	40		Used for American Express, Visa and Mastercard
itemCode	String	12		Only applicable for Visa and Mastercard
quantity	Double			Only applicable for Visa and Mastercard
unitOfMeasure	String	40		Only applicable for Visa and Mastercard
unitCost	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
amount	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
discountAmount	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
taxAmount	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
taxRate	Integer			Only applicable for Visa and Mastercard. See

				Amounts for format.
Trip Data (tripData)				
jobNumber	Integer			Optional data for trip related authorizations. Required for CabConnect cards.
operatorId	Integer			Optional data for trip related authorizations. Required for CabConnect cards.
driverId	Integer			Optional data for trip related authorizations. Required for CabConnect cards.
medallionId	String			Optional data for trip related authorizations. Required for CabConnect cards.
pickupDate	Date			Optional. The date and time of the pickup. See ISO 8601 spec for formatting.
dropoffDate	Date			Optional. The date and time of the dropoff. See ISO 8601 Optional. spec for formatting.
pickupLatitude	Double			Optional. The geographical latitude of the pickup.
pickupLongitude	Double			Optional. The geographical lontigude of the pickup.
dropoffLatitude	Double			Optional. The geographical latitude of the dropoff.
dropoffLongitude	Double			Optional. The geographical longitude of the dropoff.
passengerCounter	Integer			Optional. Number of passengers in vehicle.
tripDistance	Integer			Optional. Trip distance in hundreds of a mile. For example, a value of 500 represents 5 miles.
tripDuration	Integer			Optional. Trip duration in seconds. For example, a value of 120 represents 2 minutes.
fare	Integer			Optional. See Amounts for format.
tip	Integer			Optional. See Amounts for format.
tolls	Integer			Optional. See Amounts for format.
surcharge	Integer			Optional. See Amounts for format.
tax	Integer			Optional. See Amounts for format.
extras	Integer			Optional. See Amounts for format.
convenienceFee	Integer			Optional. See Amounts for format.
promotionCredit	Integer			Optional. See Amounts for format.
pairingToken	String	48		Optional. Unique pairing token received during the pairing process.

Response Field Description

Field	Type	Max Len	Required	Notes
transactionId	Long		x	Unique Transaction Identifier used to reference this transaction
responseCode	Integer		x	See response codes in next tables.
responseMessage	String	100	x	Additional message on response
deviceName	String	50	x	Unique device or terminal id passed on authorization request
customerReferenceNumber	String	50		Customer reference number passed on authorization request
cardType	String	20	x	Returns card type: AMEX DINERS CARTEBLANCHE DISCOVER ENROUTE JCB MASTERCARD VISA OTHER UNKNOWN
authorizationDate	Date		x	Date and time authorization took place
authorizationCode	String	10		Auth Code (note: this value is not

				unique)
amount	Integer		x	Amount that was authorized. See Amounts for format.
currencyCode	String		x	Currency of the amount authorized
employeeId	String	100		Employee ID or Driver ID passed on authorization request
authTimeMillis	Integer		x	Time (in milliseconds) it took to authorize
cardOnFileToken	String	100	x	If the saveCardOnFile indicator is set to save the card information, the token will be returned here
truncatedAccountNumber	String	10	x	The truncated account number used to authorize the transaction.
expirationDate	String	4	x	The expiration date of the card.

Merchant Authorize Response Codes

Success Sub-codes (HTTP 200)

Code	Description
1	Approved
2	Partial Approval

Error Sub-codes (HTTP 400)

Code	Description
601	Invalid fields: [See message for more details]
604	Invalid CVV2
605	Invalid AVS
606	Unable to decrypt data
607	Declined
608	Error processing request
609	Invalid CVV and No AVS match
610	Invalid Merchant
611	Unsupported Request
612	Rejected
613	Chargeback
614	Chargeback Reversal
616	Duplicate Transaction
617	Unprocessed or previous transaction not found

Sample Merchant Authorize Request (POST):

URL: ***https://payment.cmtapi.com/v2/merchants/9f2ef924f1df69ba/authorize***

```
{
   "transactionType": "S",
   "amount": 2299,
   "cardReaderMethod": 0,
   "encryptionKeyVersion": 0,
   "encryptedToken": "CMT_PAYNET",
   "encryptionAlgorithm": 1,
   "customerReferenceNumber": "1283910231622",
   "deviceName": "S1219",
   "currencyCode": "USD",
   "employeeId": "1238",
   "accountNumber": "12345678901233",
   "expirationDate": "1612",
```

```
  "zipCode": "12345",
  "cvv2": "123",
  "transactionDate": "2013-01-01T12:00:00-0400",
  "saveCardOnFile": "N",
  "L2Data": {
   "purchaseCode": "12345",
   "destinationPostalCode": "12345",
   "destinationCountry": "US",
   "sourcePostalCode": "12345",
   "salesTax": 0
  },
  "L3Data": {
   "purchaseOrderNumber": "1234567890",
   "orderDate": "2013-01-01T12:00:00-0400",
   "alternateTaxAmount": "0",
   "discountAmount": "0",
   "freightAmount": "0",
   "dutyAmount": "0",
   "taxExemptIndicator": "N"
  },
  "L23Item": [
   {
    "description": "Test",
    "itemCode": "XJAD19232",
    "quantity": 1,
    "unitOfMeasure": "BA",
    "unitCost": 32,
    "amount": 100,
    "discountAmount": 0,
    "taxAmount": 0,
    "taxRate": 0
   },
   … (indicates multiple elements)
  ],
  "tripData": {
   "jobNumber": 12345,
   "operatorId": 213,
   "driverId": 1238,
   "medallionId": "S1219",
   "pickupDate": "2013-01-01T12:00:00-0400",
   "dropoffDate": "2013-01-01T12:00:00-0400",
   "pickupLatitude": 40.7566,
   "pickupLongitude": 73.9863,
   "dropoffLatitude": 40.7566,
   "dropoffLongitude": 73.9863,
   "passengerCount": 2,
   "tripDistance": 500,
   "tripDuration": 120,
   "fare": 12,
   "tip": 3,
   "tolls": 0,
   "surcharge": 0,
   "tax": 0,
   "extras": 0,
   "convenienceFee": 0
  }
 }
}
```


Sample Successful Authorize Response (HTTP 200):


```
{
  "transactionId": 12345123212,
```

```
   "responseCode": 1,
   "responseMessage": "Approved",
   "deviceName": "S1219",
   "customerReferenceNumber": "1283910231622",
   "cardType": "VISA",
   "authorizationDate": "2013-01-01T12:00:00-0400",
   "authorizationCode": "AKAIS123",
   "amount": 2299,
   "currencyCode": "USD",
   "employeeId": "1238",
   "authTimeMillis": 123,
   "truncatedAccountNumber": "1233",
   "expirationDate": "1612"
}
```


Unsuccessful Authorize Response (HTTP 400):


```
{
   "responseCode": 607,
   "responseMessage": "Declined"
}
```

II. Capture Resource

Summary

The ***capture*** method provides a programmatic interface to capture (settle) credit card pre-authorizations. The ***capture*** method takes as input a **Capture Request** and returns a **Capture Response**. Please see the field list below for a detailed description of the input parameters including types, length and if the field is optional. Also note that when capturing a transaction, Purchase Card Level 2 and Level 3 data may optionally be passed.

Additional/Optional Data

CMT supports optional data fields to support Purchase Card Level 2 and Level 3 data information.

Level 2/3 Data

CMT supports passing Purchasing Card Level 2 information (such as purchase order number, tax amount, and postal codes, etc…). CMT Also supports Level 3 data and line item records which include line item details for purchases. See the description below as not card types support all fields.

	Resource	Description
A.	POST merchants/:merchantToken/capture	Provides access to capture pre-authorizations using merchant information.

A. POST merchants/:merchantToken/capture

This method is designed to capture pre-authorization transaction. A capture request may only follow a transaction associated with a successful preauthorization request.

Merchant Capture Resource URLs

Production: https://payment.cmtapi.com/v2/merchants/:merchantToken/capture

Sandbox: https://payment-sandbox.cmtapi.com/v2/merchants/:merchantToken/capture

Merchant Capture Parameters

merchantToken (required) - See Merchant Token

If the event that the response sub-code is HTTP 400 indicating an error, then only two fields, responseCode and responseMessage, will be returned.

URL Parameters

Field	DataType	Size	Required	Notes
:merchantToken	String		x	The unique merchant token for the fleet's request

Request Field Description

Field	Type	Max Len	Required	Notes
transactionId	Long		x	Unique Transaction Identifier used to reference this transaction
amount	Integer			Amount to capture (may be different than authorized amount). If left blank, the amount authorized will be the amount captured. Currency is the same as the original transaction. See Amounts for format.
employeeId	String	100		Driver or employee id
Level 2 Data				
purchaseCode	String	16		Used for American Express, Visa and Mastercard. Only first 10 characters are sent to American Express
destinationPostalCode	String	10		Only applicable for Visa, Mastercard and American Express (Only first 6 characters are sent to American Express)
destinationCountry	String	2		Only applicable for Visa and Mastercard See ISO 3166-1 alpha-2 spec for values.
sourcePostalCode	String	10		Used for American Express, Visa and Mastercard. Only first 6 characters are sent to American Express
salesTax	Integer			
Level 3 Data				
purchaseOrderNumber	String	16		Item's purchase order number
orderDate	Date			Purchase date. See ISO 8601 spec for formatting.
alternateTaxAmount	Integer			Total alternate tax for all the items in the purchase. See Amounts for format.
discountAmount	Integer			Total discount amount for all items in the purchase. See Amounts for format.
freightAmount	Integer			Total freight for all items in the purchase. See Amounts for format.
dutyAmount	Integer			Total duty amount for all items in the purchase. See Amounts for format.
taxExemptIndicator	Char	1		Indicates whether or not the purchase is tax exempt **Y** : purchase is tax exempt **N** : purchase is not tax exempt

Level 2/3 Item				CMT supports up to 4 Level 2/3 Item Records
description	String	40		Used for American Express, Visa and Mastercard
itemCode	String	12		Only applicable for Visa and Mastercard
quantity	Double			Only applicable for Visa and Mastercard
unitOfMeasure	String	40		Only applicable for Visa and Mastercard
unitCost	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
amount	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
discountAmount	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
taxAmount	Integer			Only applicable for Visa and Mastercard. See Amounts for format.
taxRate	Integer			Only applicable for Visa and Mastercard. See Amounts for format.

Response Field Description.

Field	Type	Max Len	Required	Notes
transactionId	Long		x	Unique Transaction Identifier used to reference this transaction
responseCode	Integer		x	See response codes in next tables.
responseMessage	String	100		Message returned from the bank
captureDate	String		x	Date and time capture took place. See ISO 8601 spec for formatting.
authorizationCode	String	10		Auth Code (note: this value is not unique)
amount	Integer		x	Amount that was captured. See Amounts for format.
currencyCode	String	3	x	Currency of the amount authorized
cardType	String	20	x	Returns card type: AMEX DINERS CARTEBLANCHE DISCOVER ENROUTE JCB MASTERCARD VISA OTHER UNKNOWN
employeeId	String	100		Employee ID or Driver ID
customerReferenceNumber	String	50		Customer reference number passed on authorization request
truncatedAccountNumber	String	10	x	The truncated account number used to authorize the transaction.
expirationDate	String	4	x	The expiration date of the card.

Merchant Capture Response Codes

Success Sub-codes (HTTP 200)

Code	Description
1	Approved
2	Partial Approval

Error Sub-codes (HTTP 400)

Code	Description
601	Invalid fields: [See message for more details]
604	Invalid CVV2
605	Invalid AVS
606	Unable to decrypt data
607	Declined
608	Error processing request
609	Invalid CVV and No AVS match
610	Invalid Merchant
611	Unsupported Request
612	Rejected
613	Chargeback
614	Chargeback Reversal
616	Duplicate Transaction
617	Unprocessed or previous transaction not found

Sample Merchant Capture Request (POST):

URL: *https://payment.cmtapi.com/v2/merchants/9f2ef924f1df69ba/capture*

```
{
   "transactionId": 12345678901234,
   "amount": 1084,
   "employeeId": "123",
   "L2Data": {
     "purchaseCode": "12345",
     "destinationPostalCode": "12345",
     "destinationCountry": "US",
     "sourcePostalCode": "12345",
     "salesTax": 0
   },
   "L3Data": {
     "purchaseOrderNumber": "1234567890",
     "orderDate": "2013-01-01T12:00:00-0400",
     "alternateTaxAmount": 0,
     "discountAmount": 0,
     "freightAmount": 0,
     "dutyAmount": 0,
     "taxExemptIndicator": "N"
   },
   "L23Item": [
     {
       "description": "Test",
       "itemCode": "XJAD19232",
       "quantity": 1,
       "unitOfMeasure": "BA",
       "unitCost": 32,
       "amount": 100,
       "discountAmount": 0,
       "taxAmount": 0,
       "taxRate": 0
     },
     … (indicates multiple elements)
   ]
}
```

Sample Successful Merchant Capture Response (HTTP 200):

```
{
```

```
  "transactionId": 12345678901234,
  "responseCode": 1,
  "responseMessage": "Approved",
  "captureDate": "2013-01-01T12:00:00-0400",
  "amount": 1084,
  "authorizationCode": "123456",
  "currencyCode": "USD",
  "cardType": "VISA",
  "employeeId": "123",
  "customerReferenceNumber": "123131321312",
  "truncatedAccountNumber": "1234",
  "expirationDate": "1612"
}
```


Unsuccessful Merchant Capture Response (HTTP 400):


```
{
  "responseCode": 604,
  "responseMessage": "Invalid CVV2"
}
```

III. Reverse Resource

Summary

The ***reverse*** resource provides a programmatic interface to reverse credit card sales and credits for CMT customers (void). The ***reverse*** method takes as input a **Reversal Request** and returns a **Reversal Response**. Please see the field list below for a detailed description of the input parameters including types, length and if the field is optional.

Also note this method can only be called until 5pm on the day of authorization for transactions of type *Sale* (S), *Credit* (C), and *Voice Authorization* (M). After 5pm, a credit must be issued via the authorization method for the amount you wish to credit. Alternatively, *Pre-authorizations* (P) may be voided anytime within 2 days.

	Resource	Description
A.	POST merchants/:merchantToken/reverse	Provides access to reverse (void) authorizations using merchant information.

A. POST merchants/:merchantToken/reverse

This method is designed to reverse authorized transactions using merchant information.

Merchant Reversal Resource URLs

Production: https://payment.cmtapi.com/v2/merchants/:merchantToken/reverse

Sandbox: https://payment-sandbox.cmtapi.com/v2/merchants/:merchantToken/reverse

Merchant Reversal Parameters

merchantToken (required) - See Merchant Token

If the event that the response sub-code is HTTP 400 indicating an error, then only two fields, responseCode and responseMessage, will be returned.

URL Parameters

Field	DataType	Size	Required	Notes
:merchantToken	String		x	The unique merchant token for the fleet's request

Request Field Description

Field	Type	Max Len	Required	Notes
transactionId	Long		x (if customerFerenceNumber is not provided)	Transaction identifier of the transaction that is to be reversed.
customerReferenceNumber	String	50	x (if transactionId is not provided)	Used to look up and reverse a transaction if transactionId is not specified (not recommended). Multiple voids could occur if multiple transactions have the same customer reference number.
amount	Integer			Amount to be reversed. If an amount is not given, will use the value of the retrieved transaction. Currency code is the same as the original transaction. See Amounts for format.
employeeId	String	100		Driver or employee id

Response Field Description.

Field	Type	Max Len	Required	Notes
transactionId	Long		x	Unique Transaction Identifier used to reference this transaction
reversalDate	String		x	Date and time reversal took place. See ISO 8601 spec for formatting.
amount	Integer		x	Amount that was reversed. See Amounts for format.
responseCode	Integer		x	See response codes in next tables.
responseMessage	String	100		Message returned from the bank
customerReferenceNumber	String	50		Customer reference number passed on auth
cardType	String	20	x	
currencyCode	String	3		Currency of the amount.

employeeId	String	100		Driver or employee from the request

Merchant Reversal Response Codes

Success Sub-codes (HTTP 200)

Code	Description
1	Approved
2	Partial Approval

Error Sub-codes (HTTP 400)

Code	Description
601	Invalid fields: [See message for more details]
604	Invalid CVV2
605	Invalid AVS
606	Unable to decrypt data
607	Declined
608	Error processing request
609	Invalid CVV and No AVS match
610	Invalid Merchant
611	Unsupported Request
612	Rejected
613	Chargeback
614	Chargeback Reversal
616	Duplicate Transaction
617	Unprocessed or previous transaction not found

Sample Merchant Reversal Request (POST):

URL: ***https://payment.cmtapi.com/v2/merchants/9f2ef924f1df69ba/reverse***

```
{
   "customerReferenceNumber": "31431232322",
   "amount": 1084,
   "employeeId": "123"
}
```

Sample Successful Merchant Reversal Response (HTTP 200):

```
{
   "transactionId": 12311321221,
   "responseCode": 1,
   "responseMessage": "Approved",
   "customerReferenceNumber": "31431232322",
   "cardType": "VISA",
   "reversalDate": "2013-01-01T12:00:00-0400",
   "amount": 1084,
   "currencyCode": "USD",
   "employeeId": 123
}
```

Unsuccessful Merchant Reversal Response (HTTP 400):

```
{
   "responseCode": 610,
   "responseMessage": "Invalid Merchant"
```

```
}
```

IV. Tokenize Resource

Summary

The Tokenization Resources provide programmatic access to create and delete credit card tokens. Please note that this functionality is not a profile storage for customer data.

Supported cards are American Express, Mastercard, Visa, Discover, Diner's Club, and JCB.

	Resource	Description
A.	POST /tokenize	Provides access to tokenize credit card data.
B.	DELETE tokenize/:cardToken	Provides access to delete tokenized credit card data.

A. POST /tokenize

This method is designed to tokenize credit card data.

Create Token Resource URLs

Production: https://payment.cmtapi.com/v2/tokenize

Sandbox: https://payment-sandbox.cmtapi.com/v2/tokenize

Create Token Parameters

None

If the event that the response sub-code is HTTP 400 indicating an error, then only two fields, responseCode and responseMessage, will be returned.

Request Field Description

Field	DataType	Size	Required	Notes
accountNumber	String	200	x	Card account number
expiryDate	String	4	x	Card expiration date in YYMM format
validateAccountInformation	Boolean			If true, a preauthorization is sent to verify the cardholder data to protect against fraud. The default is false.
cvv	String	8		Card verification value
zipCode	String	9		Either the 5 or 9 digit representation

Response Field Description

Field	DataType	Size	Required	Notes
responseCode	Integer		x	See response codes in next tables.
responseMessage	String	100	x	Message description
cardType	String	16	x	One of the following six values: AMERICAN_EXPRESS, VISA, JCB, DISCOVER, MASTERCARD, DINERS_CLUB
lastFour	String	4	x	Last four digits of the tokenized credit card number
cardOnFileToken	String	100	x	Token to be used to call the service to use the saved card information

Create Token Response Codes

Success Sub-codes (HTTP 200)

Code	Description
1	Success

Error Sub-codes (HTTP 400)

Code	Description
601	Invalid fields: [See message for more details]
602	Invalid card type or card type not supported
603	Invalid data
604	Invalid CVV2
605	Invalid AVS
606	Invalid CVV2 and AVS

607	Declined if the validateAccountInformation flag was set to true and card was not able to be authorized.
608	Error processing request

Sample Create Token Request (POST):

URL: *https://payment.cmtapi.com/v2/tokenize*

```
{
   "accountNumber": "8888888888888888",
   "expiryDate": "1504",
   "validateAccountInformation": false,
   "cvv2": "123",
   "zipCode": "11111"
}
```

Sample Successful Create Token Response (HTTP 200):

```
{
   "responseCode": 1,
   "responseMessage": "Success",
   "cartType": "VISA",
   "lastFour": "8888",
   "cardOnFileToken": "da43fdsfdsfdsfds"
}
```

Unsuccessful Create Token Response (HTTP 400):

```
{
   "responseCode": 601,
   "responseMessage": "Invalid card type or card type not supported"
}
```

B. DELETE tokenize/:cardToken

This method is designed to delete tokenized credit card data.

Delete Token Resource URLs

Production: https://payment.cmtapi.com/v2/tokenize:/cardToken

Sandbox: https://payment-sandbox.cmtapi.com/v2/tokenize/:cardToken

Delete Token Parameters

cardToken (required) - See Card on File Token

If the event that the response sub-code is HTTP 400 indicating an error, then only two fields, responseCode and responseMessage, will be returned.

Response Field Description

Field	DataType	Size	Required	Notes
responseCode	Integer		x	See response codes in next tables.
responseMessage	String	100	x	Message description

Delete Token Response Codes

Success Sub-codes (HTTP 200)

Code	Description
1	Success

Error Sub-codes (HTTP 400)

Code	Description
601	Invalid fields: [See message for more details]
603	Invalid data
608	Error processing request

Sample Delete Token Request (DELETE):

URL: *https://payment.cmtapi.com/v2/tokenize/da43fdsfdsfdsfds/*

Sample Successful Delete Token Response (HTTP 200):

```
{
   "responseCode": 1,
   "responseMessage": "Success"
}
```

Unsuccessful Delete Token Response (HTTP 400):

```
{
   "responseCode": 608,
   "responseMessage": "Error processing request"
```

```
}
```

Test Plan and Use Cases

Authorization Testing

Test #	Description	Manual	CVV2/ Zipcode	Swipe	ReadyTo Settle	Card Type	Expected Result
1	Keyed Authorization test	Y	Y	N	N	AMEX	Success
2	Keyed Authorization test	Y	Y	N	N	VISA	Success
3	Keyed Authorization test	Y	Y	N	N	MC	Success
4	Keyed Authorization test	Y	Y	N	N	DISC	Success
5	Swiped Authorization test	N	N	Y	N	AMEX	Success
6	Swiped Authorization test	N	N	Y	N	VISA	Success
7	Swiped Authorization test	N	N	Y	N	MC	Success
8	Swiped Authorization test	N	N	Y	N	DISC	Success
9	Keyed Authorization test without zipcode and cvv2	Y	N	N	N	AMEX	Success
10	Keyed Authorization test without zipcode and cvv2	Y	N	N	N	VISA	Success
11	Keyed Authorization test without zipcode and cvv2	Y	N	N	N	MC	Success
12	Keyed Authorization test without zipcode and cvv2	Y	N	N	N	DISC	Success
13	Authorization ready to settle test	Y	N	N	Y	AMEX	Should settle in the next settlement run
14	Authorization not ready to settle test	Y	N	N	N	AMEX	Should not settle until settle authorization is called

Triggering Declines

Use the following amounts with the specified card type/card reader method to trigger declines in staging.

Visa Credit purchase (Swiped) - $777.62
Visa Credit purchase (Manual) - $777.14

MC Credit purchase (Swiped) - $777.43
MC Credit purchase (Manual) - $777.51

Discover Credit purchase - $777.14

JCB Credit purchase - $777.43

AMEX Credit purchase (Swiped) - $771.01
AMEX Credit purchase (Manual) - $771.11

Appendix A

Supported Countries

United States - US

Supported Currencies

US Dollar – USD

Appendix B

Supported Card Type Transactions

	Visa, Mastercard, Discover, American Express	CabConnect Private Label	UGryd Private Label
Sale	x	x	x
Pre-authorization (requires capture)	x		
Credit	x		x
Offline sale (Voice authorization)	x		
Capture	x		
Void	x	x	x

Appendix C

Test Account Information

Card Type	Track 2 Data/Account & Expiry Date	Zip Code	AVC/CVV/CVV2
Visa	4012000033330026=160410100000639	00000	135
Mastercard	5424180279791732=160410100000639	00000	135
American Express	341092936591002=130510102930007	55555	1002
Discover	6011000259505851=4912101111119991111	00000	111