# Terminal Getting Started Guide

## Introduction

Healthcare Omni-Channel Gateway supports a full suite of functionality to support your transaction needs. This Getting Started Guide is designed to outline each feature set and what their respective functions intended use; as well as the process flow for implementation.

## Feature - Settings

The Organization Settings feature is used to fetch the Terminal serial number and Source grouping for card present transaction processing; along with the Source and Terminal respective request. These request are recommended to initiate at login to store session data, as well as a manual process for when terminals changes are made. This data is only needed to be changes when you onboard a new terminal/source.

### Terminals

- A paginated list of terminals associated with the Organization is returned for consumption in integrating application.

### Sources

- A paginated list of sources associated with the Organization is returned for consumption in integrating application.

## Overview

1. Make a POST call to create a new transaction. The initiation of the save, sale or pre-authorization transactions to be processed via the terminal.
2. Make a PUT call to cancel a transaction. Programmatic cancellation of an in progress transaction on the terminal. A Read request is recommended after any cancel request.
3. Make a POST call to void/refund a transaction. Can support both same day voids and next day or future refunds that are processed with a reference number. This transaction does not require terminal interaction. These can be partial or full transactions.
4. Make a POST call to process a credit card token. The initiation of a sale or pre-authorization with a card on file token. This transaction does not require terminal interaction.

**Request details:**

**URL**: https://tb-sandbox.paymentfusion.com/transactions

**Verb**: POST

## Required Parameters:

- **serial_number =** The serial number of the terminal. **OR:**
- **client_id=** The client identifier of the terminal.
- **amount=** The amount in USD with 2 decimals that will be charged, must be a number greater than 0.
- **merchant_id=** The merchant identifier that will be used to connect to the gateway.

## Recommended Parameters:

- **callback_url_[1|2|3]=**One of the three URLs where Transaction Broker will POST to when a HPP request is completed. This eliminates the need for polling for the request's status. Only HTTPS URLs are allowed. The callback will retry if the host is unresponsive. The response received from the callback url must have the response code 2xx. Basic auth credentials may be added in to url ie. 'https://username: password@address.com' or as an url param 'https://address.com?token=secret'. *Please note the use of approved or declined redirect parameters is the alternative to using the callback_url parameters.*
- **remote_id=** Used for keeping track of a 3rd party identifier alongside the transaction object. This is typically used by the ISV to assign its own identifier to the transaction for easy matching in case any network issues appear. This is not validated for uniqueness.

## Headers:

- **Authorization:** Needs to include `Basic` word before Base64 encoded `api_id:api_token`. The `api_id` is the identifier of the organization created on TAP; size range - `20`. The `api_token` is the unique token previously generated by TAP and provided securely to the organization; size range - `3`
  Example: `Basic ODA5BVgrNdZkZmbiFlJlTThkYTA2eG00MzA5dHh1bWZnZgfdZDE=`
- **Accept:** Specifies the requested API version. If this field is not specified or has an invalid format, the call will be routed to a previous version. If the previous version does not exist, a 404 page will be displayed.
  Example: `application/vnd.paymentfusion.v3.0.0+json`
- **Content-Type:** application/x-www-form-urlencoded
- **Cache-Control:** no-cache Host: tb-sandbox.paymentfusion.com
- **Accept-Encoding:** gzip, deflate
- **Connection:** keep-alive

**Note:** for approval transactions use even values over $30.00.

## Body:

```
{
    "serial_number": "string",
    "confirm_amount": "boolean",
    "amount": "string",
    "invoice": "string",
    "um_command": "string",
    "merchant_id": "string",
    "user_name": "string",
    "customer_name": "string",
    "software_name": "string",
    "ip_address": "string",
    "clerk_number": "string",
    "billing_street": "string",
    "billing_city": "string",
    "billing_state": "string",
    "billing_zip": "string",
    "comments": "string",
    "description": "string",
```

```
    "recurring": "string",
    "schedule": "string",
    "num_left": "string",
    "start_date": "string",
    "bill_amount": "string",
    "return_card_data": "boolean",
    "save_card": "boolean",
    "tip_amount": "string",
    "tip_method": "string",
    "allow_partial_auth": "boolean",
    "callback_url_1": "string",
    "callback_url_2": "string",
    "callback_url_3": "string",
    "terminal_text": "string",
    "suppress_signature": "boolean",
    "remote_id": "string",
    "receipt_ref_num": "integer",
    "receipt_option": "string",
    "prompt_for_zip_code": "boolean",
    "street_address": "string",
    "zip_code": "string",
    "healthcare": {
        "iias_verified": "string",
        "healthcare_amount": "string",
        "prescription_amount": "string",
        "copay_amount": "string",
        "vision_amount": "string",
        "clinic_other_amount": "string",
        "dental_amount": "string",
        "transit_amount": "string",
        "cumulative_amount": "string"
        }
    }
```

## Response Body:

```
{
    "id": "string",
    "v": "string"
}
```

## Reconciliation:

**Callback_urls**

If you provided one of the callback_url(s) in your request for a HPP URL you will receive the following notification that your end user has submitted a payment form:

**Response details:**

**URL:** callback_url[1|2|3] supplied in step 2.

**Verb:** POST

**Message body:**

```
{
    "id": "12312",
    "type": "hpp",
    "version": "3.0.0",
    "data": {
        "id": 12312,
        "amount": "30.00",
        "invoice_number": null,
        "ip_address": null,
        "user_name": null,
        "transaction_status": "approved",
        "token": "12072498e7849bbb5d4d68a24bfed0eb39813b",
        "card_type": "Visa",
        "card_expiration_date": "0921",
        "masked_card_number": "XXXXXXXXXXXX1111",
        "check_account_type": null,
        "check_account_number": null,
        "transaction_type": "Sale",
        "created_at": "2020-08-05 20:40:35 +0000",
        "gateway_identifier": "payment_fusion",
        "gateway_reference_number": "123123",
        "gateway_auth_code": "DEMO123",
        "merchant_id": "123412341234",
        "billing_address_1": null,
        "billing_address_2": null,
        "billing_city": null,
        "billing_zip": null,
        "billing_state": null,
        "comment": null,
        "description": null,
        "card_holder": "CardHolder Name",
        "auth_amount": "30.0",
        "remote_id": null,
        "input_method": null,
        "bin_data": {
            "bin": 411111,
            "card_brand": "VISA",
            "issuing_org": "JPMORGAN CHASE BANK, N.A.",
            "card_type": "CREDIT",
            "card_category": "",
            "issuing_country": "UNITED STATES",
            "issuing_country_code_a2": "US",
            "issuing_country_code_a3": "USA",
            "issuing_country_number": 840,
            "issuing_phone": "1-212-270-6000",
```

```
                "issuing_website": "HTTP://WWW.JPMORGANCHASE.COM",
                "pan_length": "16",
                "issued_entity": "",
                "is_regulated": "Y",
                "is_commercial": false,
                "is_healthcare": false
            },
            "custom_fields": {}
        },
        "hash":
    "b022d798c34f70f2fdf8210ec70a6203707ae12cf3766113051814b35d66fd59"
    }
```

If possible it is suggested to save the entire response but we realize that may not be feasible, in these instance the following parameters must be saved:

- id
- amount
- auth_amount
- transaction_status
- token
- card_type
- masked_card_number
- card_expiration_date
- remote_id

If your integration employs the use of custom fields, those should be saved too.

**How are callbacks used?**

- Retry policy
  - Callbacks will be retried up-to 3 times with fixed back off of 1min.
- Multiple webhook callbacks are expected as transaction would get updated
  - For Card transaction this can be due to data getting updated from different sources:
    - Terminal
    - Tateway
  - There are 3 bits of data that can come late:
    - signature
    - bin_data
    - emv_data
- For ACH transaction this can be due to transaction status update which can be up-to 60 days after the transaction date.
- **Recommendation**: Callbacks can be used by partners for variety of reasons so it is hard to recommend one way or the other without understanding all the use cases. Some partners use it to block user flow for receipt generation until callbacks are complete others just use it to update their system for transaction status in background. Below is recommendation based on those 2 different category of changes:
- Background Transaction Updates
  - If there are not timelines to the background updates, meaning there is no use case where partner would be sending email receipts, etc in background. It is recommended that transaction data is stored in some storage, every webhook response should result in updating the transaction in the storage.
  - Keeping corner cases and retry policy in mind, expect transaction updates for up-to 5 mins (default transaction timeout or whatever the custom configuration would be) after the transaction was initiated
  - In-flow Transaction Updates
    - If user interaction is blocked (for receipt printing) then recommendation is to wait for adequate data needed for the use cases or timeout at ~5 mins.
    - For example: If user flow is blocked for receipt printing then depending on input method type different data might be needed.
      - If input method is swipe or manual input then the first webhook should give all the data needed to print the receipt.
      - If input method is dip or tap then wait for webhook until you get EMV data for printing the receipt.
      - Timeout ~5mins (or configured transaction timeout value) regardless of the input method

**Request details:**

URL: https://tb-sandbox.paymentfusion.com/transactions/{id}/cancel

**Verb**: PUT

## Required Parameters:

- **Path:**
    - **id**= Specifies the Transaction we are targeting. Stored from step one.

## Headers:

- **Authorization:** Needs to include `Basic` word before Base64 encoded `api_id:api_token`. The `api_id` is the identifier of the organization created on TAP; size range - `20`. The `api_token` is the unique token previously generated by TAP and provided securely to the organization; size range - `3`
  Example: `Basic ODA5BVgrNdZkZmbiFlJlTThkYTA2eG00MzA5dHh1bWZnZgfdZDE=`
- **Accept:** Specifies the requested API version. If this field is not specified or has an invalid format, the call will be routed to a previous version. If the previous version does not exist, a 404 page will be displayed.
  Example: `application/vnd.paymentfusion.v3.0.0+json`
- **Content-Type:** application/x-www-form-urlencoded
- **Cache-Control:** no-cache Host: tb-sandbox.paymentfusion.com
- **Accept-Encoding:** gzip, deflate
- **Connection:** keep-alive

## Body:

```
    N/A
```

## Response Body:

```
{
    "v": "string"
}
```

**Request details:**

**URL**: https://tb-sandbox.paymentfusion.com/transactions/reversal

**Verb**: POST

## Required Parameters:

- **ref_number =** The reference number of the transaction that will be refunded.
- **merchant_id=** The merchant identifier that will be used to connect to the gateway.

## Headers:

- **Authorization:** Needs to include `Basic` word before Base64 encoded `api_id:api_token`. The `api_id` is the identifier of the organization created on TAP; size range - `20`. The `api_token` is the unique token previously generated by TAP and provided securely to the organization; size range - `3`
  Example: `Basic ODA5BVgrNdZkZmbiFlJlTThkYTA2eG00MzA5dHh1bWZnZgfdZDE=`
- **Accept:** Specifies the requested API version. If this field is not specified or has an invalid format, the call will be routed to a previous version. If the previous version does not exist, a 404 page will be displayed.
  Example: `application/vnd.paymentfusion.v3.0.0+json`
- **Content-Type:** application/x-www-form-urlencoded
- **Cache-Control:** no-cache Host: tb-sandbox.paymentfusion.com
- **Accept-Encoding:** gzip, deflate
- **Connection:** keep-alive

**Body:**

```
{
    "ref_number": "string",
    "merchant_id": "string",
    "refund_amount": "string",
    "force_duplicate": "boolean"
}
```

**Response Body:**

```
{
    "amount": "string",
    "auth_amount": "string",
    "gateway_auth_code": "string",
    "card_type": "string",
    "created_at": "string",
    "gateway_identifier": "string",
    "gateway_reference_number": "string",
    "gateway_response_message": "string",
    "gateway_result_code": "string",
    "gateway_result_text": "string",
    "merchant_id": "string",
    "mid": "string",
    "remote_id": "string",
    "tid": "string",
    "tip_amount": "string",
    "transaction_status": "string",
    "action_taken": "string",
    "v": "string"
}
```

**Request details:**

**URL:** https://tb-sandbox.paymentfusion.com/transactions/process/card

**Verb**: POST

## Required Parameters:

- **merchant_id=** The merchant identifier that will be used to connect to the gateway.
- **amount=** The amount in USD with 2 decimals that will be charged.
- **card=** The credit card token. The **credit_card_token** value that was stored from a previous transaction.

## Headers:

- **Authorization:** Needs to include `Basic` word before Base64 encoded `api_id:api_token`. The `api_id` is the identifier of the organization created on TAP; size range - `20`. The `api_token` is the unique token previously generated by TAP and provided securely to the organization; size range - `3`
  Example: `Basic ODA5BVgrNdZkZmbiFlJlTThkYTA2eG00MzA5dHh1bWZnZgfdZDE=`
- **Accept:** Specifies the requested API version. If this field is not specified or has an invalid format, the call will be routed to a previous version. If the previous version does not exist, a 404 page will be displayed.
  Example: `application/vnd.paymentfusion.v3.0.0+json`
- **Content-Type:** application/x-www-form-urlencoded
- **Cache-Control:** no-cache Host: tb-sandbox.paymentfusion.com
- **Accept-Encoding:** gzip, deflate
- **Connection:** keep-alive

## Body:

```
{
  "merchant_id": "012345",
  "amount": "10.00",
  "card": "61202658830925ad54be8b24bd840f21e5cd1",
  "invoice": "string",
  "software": "string",
  "ip_address": "string",
  "clerk": "string",
  "billing_street": "string",
  "billing_city": "string",
  "billing_state": "string",
  "billing_zip": "string",
  "comments": "string",
  "description": "string",
  "command": "string",
  "tip_amount": "string",
  "force_duplicate": "boolean",
  "allow_partial_auth": "boolean",
  "street_address": "string",
  "tax_amount": "string",
  "remote_id": "string",
  "client_id": "string"
}
```

## Response Body:

```
{
  "amount": "string",
  "auth_amount": "string",
  "gateway_auth_code": "string",
  "card_type": "string",
  "created_at": "string",
  "gateway_identifier": "string",
  "gateway_reference_number": "string",
  "gateway_response": {},
  "gateway_response_message": "string",
```

```json
    "gateway_result_code": "string",
    "gateway_result_text": "string",
    "merchant_id": "string",
    "mid": "string",
    "remote_id": "string",
    "tid": "string",
    "tip_amount": "string",
    "transaction_status": "string",
    "v": "string"
}
```