



**Apple Pay - Frontend**

# Revision History

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# Apple Pay in Apps

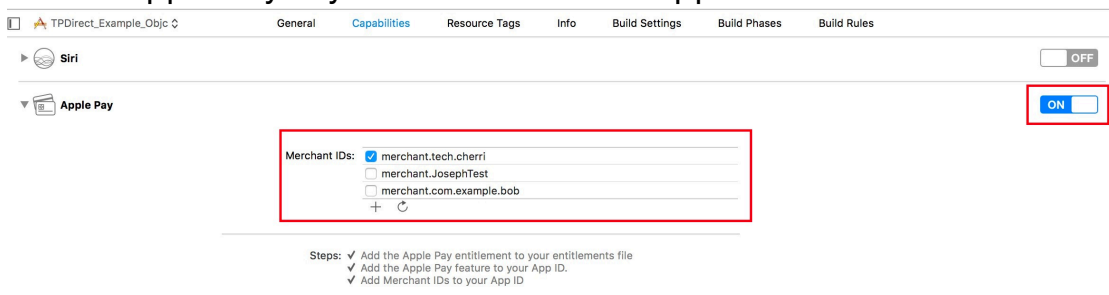
If you want to know the latest SDK version and the difference between each version, please refer to Github Release Page: [TapPay iOS Github](#)

Support iOS 10 and later.

## Environment

Before you get to coding, make sure you have done the following things:

1. Download and import [TPDirect.framework](#) into your project.
2. Import PassKit.framework into your project.
3. Enable Apple Pay in your Xcode and add Apple Merchant IDs.



4. Use TPDSetup to set up your environment.
5. Please open Advertising Identifier, to improve the accuracy of fraud detect.

# TPDSetup

## iOS-objc

```
+ (instancetype _Nonnull)setWithAppId:(int)appId
                        withAppKey:(NSString * _Nonnull)appKey
                        withServerType:(TPDServerType)serverType;
```

## iOS-Swift

```
class func setWithAppKey(_ appKey: String, withAppId appId: Int32, with serverType:
TPDServerType) -> Self
```

## iOS-objc

```
...

- (BOOL)application:(UIApplication *)application didFinishLaunchingWithOptions:
(NSDictionary *)launchOptions {
    // Override point for customization after application launch.
    [TPDSetup setWithAppId:"APP_ID" withAppKey:@"APP_KEY"
withServerType:TPDServer_SandBox];

    return YES;
}
```

## iOS-Swift

```
...

func application(_ application: UIApplication, didFinishLaunchingWithOptions
launchOptions: [UIApplicationLaunchOptionsKey: Any]?) -> Bool {
    // Override point for customization after application launch.
    TPDSetup.setWithAppId("APP_ID", withAppKey: "APP_KEY", with:
TPDServerType.sandBox)

    return true
}
```

| Name       | Type          | Usage                                                                                                                                           |
|------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| appId      | int           | Please refer to appId.                                                                                                                          |
| appKey     | String        | Please refer to appkey                                                                                                                          |
| serverType | TPDServerType | Use “TPDServerType.Sandbox” for <a href="#">sandbox</a> environment, and “TPDServerType.Production” for <a href="#">production</a> environment. |

Please open Advertising Identifier, to improve the accuracy of fraud detect.

Cancel

Submit

---

Content Rights

Does your app contain, display, or access third-party content?

☒ Yes ☐ No

---

Do you have all necessary rights to that content or are you otherwise permitted to use it under the laws of each App Store territory in which your app is available?

☒ Yes ☐ No

---

Advertising Identifier

Does this app use the Advertising Identifier (IDFA)?

☒ Yes ☐ No

The [Advertising Identifier \(IDFA\)](#) is a unique ID for each iOS device and is the only way to offer targeted ads. Users can choose to limit ad targeting on their iOS device.

If your app is using the Advertising Identifier, check your code—including any third-party code—before you submit it to make sure that your app uses the Advertising Identifier only for the purposes listed below and respects the Limit Ad Tracking setting. If you include third-party code in your app, you are responsible for the behavior of such code, so be sure to check with your third-party provider to confirm compliance with the usage limitations of the Advertising Identifier and the Limit Ad Tracking setting.

This app uses the Advertising Identifier to (select all that apply):

☐ Serve advertisements within the app

☒ Attribute this app installation to a previously served advertisement

☒ Attribute an action taken within this app to a previously served advertisement

If you think you have another acceptable use for the Advertising Identifier, [contact us](#).

Limit Ad Tracking setting in iOS

# Codes

1. Import PassKit and TPDirect frameworks into your project.

## iOS-objc

```
#import <PassKit/PassKit.h>
#import <TPDirect/TPDirect.h>
```

## iOS-Swift

```
import PassKit
import TPDirect
```

2. Implement the following classes in order:

1. TPDApplyPay
2. TPDApplePayDelegate
3. TPDTransactionResult
4. PKPaymentButton
5. TPDMerchant
6. TPDConsumer
7. TPDCart

## TPDApplePay

### iOS-objc

```
@interface ViewController () <TPDApplePayDelegate>
@property (nonatomic, strong) TPDApplePay *applePay;
@end
```

### iOS-Swift

```
class ViewController: UIViewController {
    var applePay : TPDApplePay!
}
```



# TPDApplePayDelegate

## iOS-objc

```
@protocol TPDApplePayDelegate <NSObject>

@required
// Send To The Delegate After Receive Prime and prime expiry millis.
- (void)tpdApplePay:(TPDApplePay *)applePay didReceivePrime:(NSString *)prime
withExpiryMillis:(long)expiryMillis withCardInfo:(TPDCardInfo *)cardInfo
withMerchantReferenceInfo:(NSDictionary *)merchantReferenceInfo;

// Send To The Delegate After Apple Pay Payment Processing Succeeds.
- (void)tpdApplePay:(TPDApplePay *)applePay didSuccessPayment:
(TPDTransactionResult *)result;

// Send To The Delegate After Apple Pay Payment Processing Fails.
- (void)tpdApplePay:(TPDApplePay *)applePay didFailurePayment: (TPDTransactionResult
*)result;

@optional
// Send To The Delegate After Apple Pay Payment's Form Is Shown.
- (void)tpdApplePayDidStartPayment:(TPDApplePay *)applePay;

// Send To The Delegate After User Selects A Payment Method.
// You Can Change The PaymentItem Or Discount Here.
- (TPDCart *)tpdApplePay:(TPDApplePay *)applePay didSelectPaymentMethod:
(PKPaymentMethod *)paymentMethod cart:(TPDCart *)cart;

// Send To The Delegate After User Selects A Shipping Method.
// Set shippingMethods ==> TPDMerchant.shippingMethods.
- (void)tpdApplePay:(TPDApplePay *)applePay didSelectShippingMethod:
(PKShippingMethod *)shippingMethod;

// Send To The Delegate After User Authorizes The Payment.
// You Can Check Shipping Contact Here, Return YES If Authorized.
- (BOOL)tpdApplePay:(TPDApplePay *)applePay
canAuthorizePaymentWithShippingContact:(PKContact *)shippingContact;

// Send To The Delegate After User Cancels The Payment.
- (void)tpdApplePayDidCancelPayment:(TPDApplePay *)applePay;

// Send To The Delegate After Apple Pay Payment's Form Disappeared.
- (void)tpdApplePayDidFinishPayment:(TPDApplePay *)applePay;

@end
```

## iOS-Swift

```
public protocol TPDApplePayDelegate : NSObjectProtocol {
    // Send To The Delegate After Receive Prime.
    public func tpdApplePay(_ applePay: TPDApplePay!, didReceivePrime prime: String!,
        withExpiryMillis expiryMillis: Int, withCardInfo cardInfo: TPDCardInfo,
        withMerchantReferenceInfo merchantReferenceInfo: [AnyHashable : Any]!)

    // Send To The Delegate After Apple Pay Payment Processing Succeeds.
    public func tpdApplePay(_ applePay: TPDApplePay!, didSuccessPayment result:
        TPDTransactionResult!)

    // Send To The Delegate After Apple Pay Payment Processing Fails.
    public func tpdApplePay(_ applePay: TPDApplePay!, didFailurePayment result:
        TPDTransactionResult!)

    // Send To The Delegate After Apple Pay Payment's Form Is Shown.
    optional public func tpdApplePayDidStartPayment(_ applePay: TPDApplePay!)

    // Send To The Delegate After User Selects A Payment Method.
    // You Can Change The PaymentItem Or Discount Here.
    @available(iOS 9.0, *)
    optional public func tpdApplePay(_ applePay: TPDApplePay!, didSelect paymentMethod:
        PKPaymentMethod!, cart: TPDCart!) -> TPDCart!

    // Send To The Delegate After User Selects A Shipping Method.
    // Set shippingMethods ==> TPDMerchant.shippingMethods.
    @available(iOS 8.0, *)
    optional public func tpdApplePay(_ applePay: TPDApplePay!, didSelect shippingMethod:
        PKShippingMethod!)

    // Send To The Delegate After User Authorizes The Payment.
    // You Can Check Shipping Contact Here, Return YES If Authorized.
    @available(iOS 9.0, *)
    optional public func tpdApplePay(_ applePay: TPDApplePay!,
        canAuthorizePaymentWithShippingContact shippingContact: PKContact!) -> Bool

    // Send To The Delegate After User Cancels The Payment.
    optional public func tpdApplePayDidCancelPayment(_ applePay: TPDApplePay!)

    // Send To The Delegate After Apple Pay Payment's Form Disappeared.
    optional public func tpdApplePayDidFinishPayment(_ applePay: TPDApplePay!)
}
```

| Name                                   | Usage                                                                   |
|----------------------------------------|-------------------------------------------------------------------------|
| didSuccessPayment                      | Called when a successful payment has been made.                         |
| didFailurePayment                      | Called when the payment failed.                                         |
| tpdApplePayDidStartPayment             | Called when the payment begins.                                         |
| didSelectPaymentMethod                 | Called when a payment method is selected.                               |
| didSelectShippingMethod                | Called when a shipping method is selected.                              |
| canAuthorizePaymentWithShippingContact | Check if the payment can be authorized with the given shipping contact. |

| Name                                                                    | Usage                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tpdApplePayDidCancelPayment                                             | Called when the payment is cancelled.                                                                                                                                                                                                     |
| tpdApplePayDidFinishPayment                                             | Called when the payment is finished, but before the result has been determined.                                                                                                                                                           |
| didReceivePrime:withExpiryMillis:withCardInfo:withMerchantReferenceInfo | Called when you obtained the Prime and expiry millis from TapPay.<br>You should pass this token back to your server, and call our Pay by Prime API to finish the transaction. Afterwards, call "showPaymentResult" to display the result. |
| showPaymentResult                                                       | Called after you finished the payment process on your server with Pay by Prime API.                                                                                                                                                       |

## TPDTransactionResult

### iOS-objc

```
@interface TPDTransactionResult : NSObject
// message, Report Message.
@property (nonatomic, strong) NSString *message;

// status, Result Code, '0' Means Success.
@property (nonatomic, assign) NSInteger status;

// amount
@property (nonatomic, strong) NSDecimalNumber *amount;

// paymentMehod
@property (nonatomic, strong) PKPaymentMethod *paymentMethod;
@end
```

### iOS-Swift

```
class TPDTransactionResult : NSObject {
// message, Report Message.
var message: String!

// status, Result Code, '0' Means Success.
var status: Int

// amount
var amount: NSDecimalNumber!

// paymentMehod
var paymentMethod: PKPaymentMethod!
}
```

The returned object in didSuccessPayment and didFailurePayment, TPDTransactionResult, will contain the following values:

| Name         | Usage                                   |
|--------------|-----------------------------------------|
| amount       | Amount for the transaction.             |
| status       | Status code for the transaction.        |
| message      | Error message for the transaction.      |
| paymentMehod | Apple's <a href="#">PKPaymentMethod</a> |

## iOS-objc

```

- (void)tpdApplePayDidStartPayment:(TPDApplePay *)applePay {
    NSLog(@"=====");
    NSLog(@"Apple Pay On Start");
    NSLog(@"===== \n\n");
}

- (void)tpdApplePay:(TPDApplePay *)applePay didSuccessPayment:
(TPDTransactionResult *)result {
    NSLog(@"=====");
    NSLog(@"Apple Pay Did Success ==> Amount : %@", [result.amount stringValue]);
    NSLog(@"shippingContact.name : %@ %@",
applePay.consumer.shippingContact.name.givenName,
applePay.consumer.shippingContact.name.familyName);
    NSLog(@"shippingContact.emailAddress : %@",
applePay.consumer.shippingContact.emailAddress);
    NSLog(@"shippingContact.phoneNumber : %@",
applePay.consumer.shippingContact.phoneNumber.stringValue);
    NSLog(@"===== \n\n");
}

- (void)tpdApplePay:(TPDApplePay *)applePay didFailurePayment: (TPDTransactionResult
*)result {
    NSLog(@"=====");
    NSLog(@"Apple Pay Did Failure ==> Message : %@, ErrorCode : %ld", result.message,
(long)result.status);
    NSLog(@"===== \n\n");
}

- (void)tpdApplePayDidCancelPayment:(TPDApplePay *)applePay {
    NSLog(@"=====");
    NSLog(@"Apple Pay Did Cancel");
    NSLog(@"===== \n\n");
}

- (void)tpdApplePayDidFinishPayment:(TPDApplePay *)applePay {
    NSLog(@"=====");
    NSLog(@"Apple Pay Did Finish");
    NSLog(@"===== \n\n");
}

- (void)tpdApplePay:(TPDApplePay *)applePay didSelectShippingMethod:
(PKShippingMethod *)shippingMethod {
    NSLog(@"=====");
    NSLog(@"=====> didSelectShippingMethod: ");
    NSLog(@"Shipping Method.identifier : %@", shippingMethod.identifier);
    NSLog(@"Shipping Method.detail : %@", shippingMethod.detail);
}

```

```

        NSLog(@"===== \n\n");
    }

    - (TPDCart *)tpdApplePay:(TPDApplePay *)applePay didSelectPaymentMethod:
    (PKPaymentMethod *)paymentMethod cart:(TPDCart *)cart {
        NSLog(@"=====");
        NSLog(@"=====> didSelectPaymentMethod: ");
        NSLog(@"===== \n\n");
        if (paymentMethod.type == PKPaymentMethodTypeDebit) {
            [self.cart addPaymentItem:[TPDPaymentItem paymentItemWithName:@"Discount"
            withAmount:[NSDecimalNumber
            decimalNumberWithString:@"-1.00"]]];
        }
        return self.cart;
    }

    - (BOOL)tpdApplePay:(TPDApplePay *)applePay
    canAuthorizePaymentWithShippingContact:(PKContact *)shippingContact {
        NSLog(@"=====");
        NSLog(@"=====> canAuthorizePaymentWithShippingContact ");
        NSLog(@"shippingContact.name : %@ %@",
        applePay.consumer.shippingContact.name.givenName,
        applePay.consumer.shippingContact.name.familyName);
        NSLog(@"shippingContact.emailAddress : %@", shippingContact.emailAddress);
        NSLog(@"shippingContact.phoneNumber : %@",
        shippingContact.phoneNumber.stringValue);
        NSLog(@"===== \n\n");
        return YES;
    }

    - (void)tpdApplePay:(TPDApplePay *)applePay didReceivePrime:(NSString *)prime
    withExpiryMillis:(long)expiryMillis withCardInfo:(TPDCardInfo *)cardInfo
    withMerchantReferenceInfo:(NSDictionary *)merchantReferenceInfo {

        // 1. Send Your 'Prime' To Your Server, And Handle Payment With Result
        // ...
        NSLog(@"=====");
        NSLog(@"=====> didReceivePrime ");
        NSLog(@"Prime : %@", prime);
        NSLog(@"apple pay %lu", expiryMillis);
        NSLog(@"totalAmount : %@", applePay.cart.totalAmount);
        NSLog(@"Client IP : %@", applePay.consumer.clientIP);
        NSLog(@"shippingContact.name : %@ %@",
        applePay.consumer.shippingContact.name.givenName,
        applePay.consumer.shippingContact.name.familyName);
        NSLog(@"shippingContact.emailAddress : %@",
        applePay.consumer.shippingContact.emailAddress);
        NSLog(@"shippingContact.phoneNumber : %@",
        applePay.consumer.shippingContact.phoneNumber.stringValue);
        PKPaymentMethod * paymentMethod = applePay.consumer.paymentMethod;
        NSLog(@"Type : %ld", (long)paymentMethod.type);
        NSLog(@"Network : %@", paymentMethod.network);
        NSLog(@"Display Name : %@", paymentMethod.displayName);
        NSLog(@"===== \n\n");

        // 2. If Payment Success, applePay.
        BOOL paymentResult = YES;
        [applePay showPaymentResult:paymentResult];
    }

```

## iOS-Swift

```
extension ViewController :TPDApplePayDelegate {

func tpdApplePayDidStartPayment(_ applePay: TPDApplePay!) {
    print("=====")
    print("Apple Pay On Start")
    print("=====\n\n")
}

func tpdApplePay(_ applePay: TPDApplePay!, didSuccessPayment result:
TPDTransactionResult!) {
    print("=====")
    print("Apple Pay Did Success ==> Amount : \(result.amount.stringValue)")
    print("shippingContact.name : \
(applePay.consumer.shippingContact?.name?.givenName) \
(applePay.consumer.shippingContact?.name?.familyName)")
    print("shippingContact.emailAddress : \
(applePay.consumer.shippingContact?.emailAddress)")
    print("shippingContact.phoneNumber : \
(applePay.consumer.shippingContact?.phoneNumber?.stringValue)")
    print("Shipping Method.identifier : \(applePay.cart.shippingMethod.identifier)")
    print("Shipping Method.detail : \(applePay.cart.shippingMethod.detail)")
    print("=====\n\n")
}

func tpdApplePay(_ applePay: TPDApplePay!, didFailurePayment result:
TPDTransactionResult!) {
    print("=====")
    print("Apple Pay Did Failure ==> Message : \(result.message), ErrorCode : \
(result.status)")
    print("=====\n\n")
}

func tpdApplePayDidCancelPayment(_ applePay: TPDApplePay!) {
    print("=====")
    print("Apple Pay Did Cancel")
    print("=====\n\n")
}

func tpdApplePayDidFinishPayment(_ applePay: TPDApplePay!) {
    print("=====")
    print("Apple Pay Did Finish")
    print("=====\n\n")
}

func tpdApplePay(_ applePay: TPDApplePay!, didSelect shippingMethod:
PKShippingMethod!) {
    print("=====")
    print("=====> didSelectShippingMethod: ")
    print("Shipping Method.identifier : \(shippingMethod.identifier)")
    print("Shipping Method.detail : \(shippingMethod.detail)")
    print("=====\n\n")
}

func tpdApplePay(_ applePay: TPDApplePay!, didSelect paymentMethod:
PKPaymentMethod!, cart: TPDCart!) -> TPDCart! {
    print("=====");
    print("=====> didSelectPaymentMethod: ");
}
```

```

        print("=====\n\n");
        if paymentMethod.type == .debit {
            self.cart.add(TPDPaymentItem(itemName: "Discount", withAmount:
NSDecimalNumber(string: "-1.00")))
        }
        return self.cart;
    }

    func tpdApplePay(_ applePay: TPDApplPay!,
canAuthorizePaymentWithShippingContact shippingContact: PKContact!) -> Bool {
        print("=====")
        print("=====> canAuthorizePaymentWithShippingContact ")
        print("shippingContact.name : \
(applePay.consumer.shippingContact?.name?.givenName) \
(applePay.consumer.shippingContact?.name?.familyName)")
        print("shippingContact.emailAddress : \(shippingContact.emailAddress)")
        print("shippingContact.phoneNumber : \(shippingContact.phoneNumber?.stringValue)")
        print("=====\n\n")
        return true;
    }

    tpdApplePay(_ applePay: TPDApplPay!, didReceivePrime prime: String!, withExpiryMillis
expiryMillis: Int, withCardInfo cardInfo: TPDCardInfo, withMerchantReferenceInfo
merchantReferenceInfo: [AnyHashable : Any]!) {

        // 1. Send Your Prime To Your Server, And Handle Payment With Result
        // ...
        print("=====");
        print("=====> didReceivePrime");
        print("Prime : \(prime!)");
        print("Expiry Millis : \(expiryMillis)");
        print("total Amount : \(applePay.cart.totalAmount!)");
        print("Client IP : \(applePay.consumer.clientIP!)");
        print("shippingContact.name : \
(applePay.consumer.shippingContact?.name?.givenName) \
(applePay.consumer.shippingContact?.name?.familyName)");
        print("shippingContact.emailAddress : \
(applePay.consumer.shippingContact?.emailAddress)");
        print("shippingContact.phoneNumber : \
(applePay.consumer.shippingContact?.phoneNumber?.stringValue)");
        let paymentMethod = self.consumer.paymentMethod!
        print("type : \(paymentMethod.type.rawValue)")
        print("Network : \(paymentMethod.network!.rawValue)")
        print("Display Name : \(paymentMethod.displayName!)")
        print("=====\n\n");

        // 2. If Payment Success, applePay.
        let paymentResult = true;
        applePay.showPaymentResult(paymentResult)
    }
}

```

| Name                  | Type        | Usage                                                                                                                                                                                                                                     |
|-----------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| prime                 | String      | prime token used in Pay by Prime                                                                                                                                                                                                          |
| expiryMillis          | Int         | prime expired millis                                                                                                                                                                                                                      |
| cardInfo              | TPDCardInfo | Card information<br>For the format, please refer to the table shown below                                                                                                                                                                 |
| merchantReferenceInfo | JSONObject  | If the merchant uses the co-branded card management in the TapPay portal, and the transaction card number meets the setting, this parameter will be returned.<br><br>Set in TapPay Portal, must limit 20 character and half alphanumeric. |

#### cardInfo format

| Name        | Type (Max) | Usage                                                                                           |
|-------------|------------|-------------------------------------------------------------------------------------------------|
| bincode     | String(6)  | First six digits of the card                                                                    |
| lastFour    | String(4)  | Last four digits of the card                                                                    |
| issuer      | String     | Card issuer                                                                                     |
| issuerZhTw  | String     | Card issuer chinese name                                                                        |
| bankId      | String     | Bank identifier                                                                                 |
| funding     | int        | Card usage<br>-1 = Unknown<br>0 = credit card<br>1 = debit card<br>2 = prepaid card             |
| cardType    | int        | Card type<br>-1 = Unknown<br>1 = VISA<br>2 = MasterCard<br>3 = JCB<br>4 = Union Pay<br>5 = AMEX |
| level       | String     | Card level                                                                                      |
| country     | String     | Country of card issuer                                                                          |
| countryCode | String     | Country code of card issuer                                                                     |

#### merchantReferenceInfo format

| Name           | Type  | Usage                                                                                           |
|----------------|-------|-------------------------------------------------------------------------------------------------|
| affiliateCodes | Array | Affiliated codes set by the merchant in the Co-brand card management area of the TapPay portal. |



# PKPaymentButton

## iOS-objc

```
@interface ViewController () <TPDApplePayDelegate>
@property (nonatomic, strong) PKPaymentButton *applePayButton;
@end
```

## iOS-Swift

```
class ViewController: UIViewController {
    var applePayButton : PKPaymentButton!
}
```

You should check if the card or the device supports Apple Pay before setting up the payment button.

## iOS-objc

```
/**
 [TPDApplePay canMakePaymentsUsingNetworks:(NSArray<PKPaymentNetwork> *)]
 Check support card network.

 TPDApplePay setupWthMerchant:(TPDMerchant *) withConsumer:(TPDConsumer *)
 withCart:(TPDCart *) withDelegate:(id)
 Use TPDMerchant, TPDConsumer, TPDCart to initial Apple Pay Instance.

 startPayment
 Start Apple Pay Payment Sheet
 */

- (void)paymentButtonSetting {
    // Check if the card can use Apple Pay.
    if ([TPDApplePay canMakePaymentsUsingNetworks:self.merchant.supportedNetworks])
    {
        self.applePayButton = [PKPaymentButton
buttonWithType:PKPaymentButtonTypeBuy style:PKPaymentButtonStyleBlack];
    }else{
        self.applePayButton = [PKPaymentButton
buttonWithType:PKPaymentButtonTypeSetUp style:PKPaymentButtonStyleBlack];
    }

    [self.view addSubview:self.applePayButton];
    self.applePayButton.center = self.view.center;

    [self.applePayButton addTarget:self action:@selector(didClickButton:)
forControlEvents:UIControlEventTouchUpInside];
}

- (void)didClickButton:(PKPaymentButton *)sender {
    self.applePay = [TPDApplePay setupWthMerchant:self.merchant
withConsumer:self.consumer withCart:self.cart withDelegate:self];
    [self.applePay startPayment];
}
```

## iOS-Swift

```
/**
    TPDApplePay.canMakePayments(usingNetworks: [PKPaymentNetwork]!)
    Check support card network.

    TPDApplePay.setupWithMerchant(TPDMerchant!, with: TPDCustomer!, with: TPDCart!,
    withDelegate: Any!)
    Use TPDMerchant, TPDCustomer, TPDCart to initial Apple Pay Instance.

    startPayment
    Start Apple Pay Payment Sheet
*/

func paymentButtonSetting() {

    // Check if the card can use Apple Pay.
    if (TPDApplePay.canMakePayments(usingNetworks: self.merchant.supportedNetworks))
    {
        applePayButton = PKPaymentButton.init(paymentButtonType: .buy,
        paymentButtonStyle: .black)
    } else {
        applePayButton = PKPaymentButton.init(paymentButtonType: .setUp,
        paymentButtonStyle: .black)
    }

    view.addSubview(applePayButton)
    applePayButton.center = view.center

    applePayButton.addTarget(self, action:
    #selector(ViewController.didClickBuyButton(sender:)), for: .touchUpInside)
}

@objc func didClickBuyButton(sender:PKPaymentButton) {

    applePay = TPDApplePay.setupWithMerchant(merchant, with: consumer, with: cart,
    withDelegate: self)

    applePay.startPayment()
}
```

# TPDMerchant

## iOS-objc

```
@interface ViewController () <TPDApplePayDelegate>
@property (nonatomic, strong) TPDMerchant *merchant;
@end
```

## iOS-Swift

```
class ViewController: UIViewController {
    var merchant : TPDMerchant!
}
```

## iOS-objc

```
self.merchant = [TPDMerchant new];
self.merchant.merchantName = @"TapPay!";
self.merchant.merchantCapability = PKMerchantCapability3DS;
self.merchant.applePayMerchantIdentifier = @"merchant.apple.pay";
self.merchant.countryCode = @"TW";
self.merchant.currencyCode = @"TWD";
self.merchant.supportedNetworks = @[PKPaymentNetworkAmex,
PKPaymentNetworkMasterCard, PKPaymentNetworkVisa, PKPaymentNetworkJCB];
```

## iOS-Swift

```
merchant = TPDMerchant()
merchant.merchantName = "TapPay!";
merchant.merchantCapability = .capability3DS;
merchant.applePayMerchantIdentifier = "merchant.apple.pay";
merchant.countryCode = "TW";
merchant.currencyCode = "TWD";
merchant.supportedNetworks = [.amex, .masterCard, .visa, .JCB]
```

| Name                       | Values                                                                                                               |
|----------------------------|----------------------------------------------------------------------------------------------------------------------|
| merchantName               | Display merchant name on Payment Sheet.                                                                              |
| merchantCapability         | The payment capabilities supported by the merchant, please refer to <a href="#">Apple Pay merchantCapabilities</a> . |
| applePayMerchantIdentifier | The Apple Merchant ID.                                                                                               |
| countryCode                | The abbreviation code for the country following the ISO 3166-1 alpha-2 format.                                       |
| currencyCode               | The abbreviation code for the country currency following the ISO 4217 format.                                        |
| supportedNetworks          | Set the credit card network you want to support                                                                      |

supportedNetworks card network supported version

| Card network     | Version                   |
|------------------|---------------------------|
| American Express | iOS 8.0+<br>watchOS 3.0+  |
| MasterCard       | iOS 8.0+<br>watchOS 3.0+  |
| Visa             | iOS 8.0+<br>watchOS 3.0+  |
| JCB              | iOS 10.0+<br>watchOS 3.1+ |

## TPDConsumer

### iOS-objc

```
@interface ViewController () <TPDApplePayDelegate>
@property (nonatomic, strong) TPDConsumer *consumer;
@end
```

### iOS-Swift

```
class ViewController: UIViewController {
    var consumer : TPDConsumer!
}
```

### iOS-objc

```
self.consumer = [TPDConsumer new];
self.consumer.requiredShippingAddressFields = PKAddressFieldEmail |
PKAddressFieldName | PKAddressFieldPhone;
self.consumer.requiredBillingAddressFields = PKAddressFieldPostalAddress;
```

### iOS-Swift

```
consumer = TPDConsumer()
consumer.requiredShippingAddressFields = [.email, .name, .phone]
consumer.requiredBillingAddressFields = [.postalAddress]
```

| Name                          | Content                                                                     |
|-------------------------------|-----------------------------------------------------------------------------|
| requiredShippingAddressFields | Required shipping address information field.<br>Default no fields required. |
| requiredBillingAddressFields  | Required billing address information field.<br>Default no fields required.  |

After the Apple Pay authentication is successful, you can get the card information in the `didReceivePrime` delegate, `TPDConsumer.paymentMethod`  
More info refer to apple pay docs [PKPaymentMethod](#).

| Name        | Content                                                                         |
|-------------|---------------------------------------------------------------------------------|
| type        | Card type<br>0 : unknown<br>1 : debit<br>2 : credit<br>3 : prepaid<br>4 : store |
| network     | Card network                                                                    |
| displayName | Card network and card last four number                                          |

## TPDCart

### iOS-objc

```
@interface ViewController () <TPDApplePayDelegate>
@property (nonatomic, strong) TPDCart *card;
@end
```

### iOS-Swift

```
class ViewController: UIViewController {
    var card : TPDCart!
}
```

## iOS-objc

```
/**
 [cart addPaymentItem:(TPDPaymentItem *)]
 Add payment item to item list.
 */
self.cart = [TPDCart new];

TPDPaymentItem *book = [TPDPaymentItem paymentItemWithItemName:@"Book"
                                withAmount:[NSDecimalNumber
decimalNumberWithString:@"100.00"]];
[self.cart addPaymentItem:book];

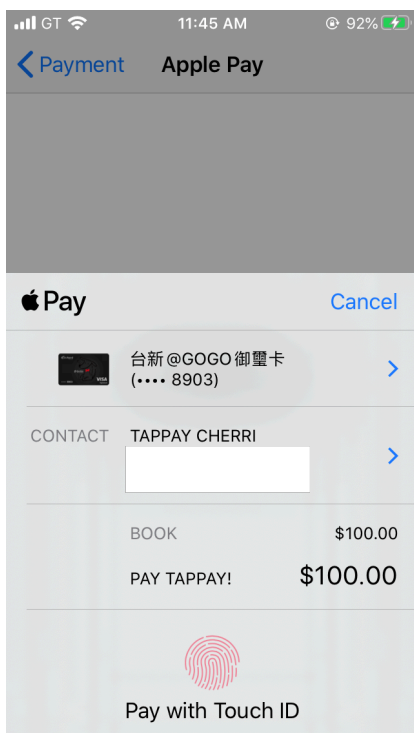
self.cart.shippingType = PKShippingTypeShipping;
```

## iOS-Swift

```
/**
 cart.add(TPDPaymentItem!)
 Add payment item to item list.
 */

cart = TPDCart()
let book = TPDPaymentItem(itemName:"Book",
                        withAmount: NSDecimalNumber(string: "100.00"))
cart.add(book)
cart.shippingType = .shipping;
```

You can use TPDPaymentItem to add new items to TPDCart.  
Use paymentItemWithItemName to set up to display the amount of items.  
The sum of amount of items in TPDCart must be greater than zero, otherwise the program will return error code: 88016



# Deferred Payment

## iOS-objc

```
self.cart = [TPDCart new];
self.cart.isAmountPending = YES;
self.cart.isShowTotalamount = NO;

TPDPaymentItem *initialCharge = [TPDPaymentItem paymentItemWithName:@"Initial
Charge"
                                withAmount:[NSDecimalNumber decimalNumberWithString:@"100.00"]];
[self.cart addPaymentItem:initialCharge];

TPDPaymentItem *improvementSurcharge = [TPDPaymentItem
pendingPaymentItemWithName:@"NT$5 per miles"];
[self.cart addPaymentItem:improvementSurcharge];
```

## iOS-Swift

```
cart = TPDCart()
cart.isAmountPending = true
cart.isShowTotalAmount = false

let initialCharge = TPDPaymentItem(itemName: "Initial Charge", withAmount:
NSDecimalNumber(string: "100.00"))
cart.add(initialCharge)

let improvementSurcharge = TPDPaymentItem.pendingPaymentItem(withItemName:
"NT$5 per miles")
cart.add(improvementSurcharge)
```

Please contact TapPay Customer Service (support@cherri.tech) to activate Apple Pay deferred payment.

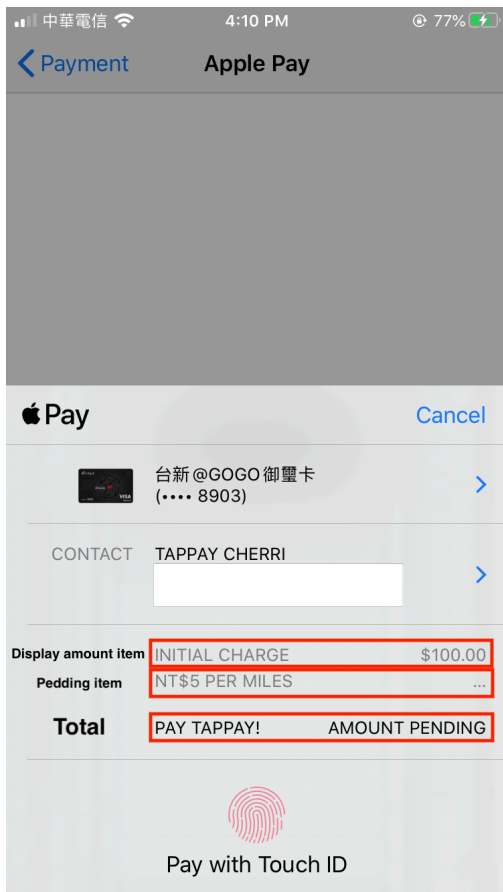
Once the function has been activated, the prime could live for 30 days and payment amount is set by Pay by Prime, not by SDK.

The property isAmountPending of TPDCart could determine whether this transaction enables deferred payment or not. Default is false

The property isShowTotalAmount of TPDCart could determine that total amount of the payment sheet shows the sum of each payment item's amount or AMOUNT PENDING. Default is false

If the property pendingPaymentItemWithName has been set in TPDCart, the payment item's amount of the payment sheet will show 『 · · · 』, which means actual payment amount is unknown.

Use deferred payment, please note the following rules



All items in TPDCart have specific amount.

| isAmountPending | isShowTotalAmount | Total field                             | Prime expire time |
|-----------------|-------------------|-----------------------------------------|-------------------|
| TRUE            | TRUE              | Display Total Amount                    | 30days            |
| TRUE            | FALSE             | Display Amount Pending                  | 30days            |
| FALSE           | TRUE              | Display Total Amount                    | 90sec             |
| FALSE           | FALSE             | Not Support, refer to error code: 88013 | X                 |

All items in TPDCart are amount pending.

| isAmountPending | isShowTotalAmount | Total field                             | Prime expire time |
|-----------------|-------------------|-----------------------------------------|-------------------|
| TRUE            | TRUE              | Not Support, refer to error code:88014  | X                 |
| TRUE            | FALSE             | Display Amount Pending                  | 30days            |
| FALSE           | TRUE              | Not Support, refer to error code: 88015 | X                 |
| FALSE           | FALSE             | Not Support, refer to error code: 88013 | X                 |



The items in TPDCart have specific amount and amount pending.

| isAmountPending | isShowTotalAmount | Total field                             | Prime expire time |
|-----------------|-------------------|-----------------------------------------|-------------------|
| TRUE            | TRUE              | Display Total Amount                    | 30days            |
| TRUE            | FALSE             | Display Amount Pending                  | 30days            |
| FALSE           | TRUE              | Not Support, refer to error code: 88015 | X                 |
| FALSE           | FALSE             | Not Support, refer to error code: 88013 | X                 |

## Notice

Due to total amount should be set above 0 in iOS 12 and version lower.  
For compatibility, iOS SDK v2.6.0 and version higher will set total amount of 1 to Apple Pay in following situation.

1. The items of TPDCart are amount pending items and total amount is set to show 『AMOUNT PENDING』 (self.cart.isAmountPending = true).
2. The total amount of items of TPDCart is 0 and total amount is set to show 『AMOUNT PENDING』 (self.cart.isAmountPending = true)

## Example

If you have any questions, please refer our [Apple Pay Example](#).

# Apple Pay on the Web

If you want to know the latest SDK version and the difference between each version, please refer to Github Release Page: [TapPay Web Github](#)

Apple Pay JavaScript API is only available on iOS device running iOS 10 or later or Mac running macOS Sierra (10.12) or later.

If you enable Apple Pay on the Web Merchant Application Service, please fill in merchant identifier which generated by TapPay (You can find it from Portal > Payment Methods > Apple Pay On The Web)

## Requirements

In Apple Pay on the Web, you must meet the following requirements:

1. All pages that include Apple Pay must be served over HTTPS , In production and sandbox. In develop enviroment you can use ngrok to set up an SSH tunnel , you can refer to our [Ngrok tutorial](#).
2. Your domain must have a valid SSL certificate.
3. Your server must support the Transport Layer Security (TLS) 1.2 protocol and one of the cipher suites listed below:

| Cipher Suite Value | Description                           |
|--------------------|---------------------------------------|
| 0xC02F             | TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 |
| 0xC027             | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 |
| 0xC013             | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA    |
| 0x009E             | TLS_DHE_RSA_WITH_AES_128_GCM_SHA256   |
| 0x0067             | TLS_DHE_RSA_WITH_AES_128_CBC_SHA256   |
| 0x009C             | TLS_RSA_WITH_AES_128_GCM_SHA256       |
| 0x003C             | TLS_RSA_WITH_AES_128_CBC_SHA256       |

4. Your server must allow access over HTTPS (TCP over port 443) to the Apple Pay IP Addresses provided below:

| IP           | Name                                                | Type       |
|--------------|-----------------------------------------------------|------------|
| 17.171.85.7  | <a href="#">apple-pay-gateway-cert.apple.com</a>    | Sandbox    |
| 17.171.78.7  | <a href="#">apple-pay-gateway-nc-pod1.apple.com</a> | Production |
| 17.171.78.71 | <a href="#">apple-pay-gateway-nc-pod2.apple.com</a> | Production |

| IP             | Name                                                                                                | Type       |
|----------------|-----------------------------------------------------------------------------------------------------|------------|
| 17.171.78.135  | <a href="https://apple-pay-gateway-nc-pod3.apple.com">apple-pay-gateway-nc-pod3.apple.com</a>       | Production |
| 17.171.78.199  | <a href="https://apple-pay-gateway-nc-pod4.apple.com">apple-pay-gateway-nc-pod4.apple.com</a>       | Production |
| 17.171.79.12   | <a href="https://apple-pay-gateway-nc-pod5.apple.com">apple-pay-gateway-nc-pod5.apple.com</a>       | Production |
| 17.141.128.7   | <a href="https://apple-pay-gateway-pr-pod1.apple.com">apple-pay-gateway-pr-pod1.apple.com</a>       | Production |
| 17.141.128.71  | <a href="https://apple-pay-gateway-pr-pod2.apple.com">apple-pay-gateway-pr-pod2.apple.com</a>       | Production |
| 17.141.128.135 | <a href="https://apple-pay-gateway-pr-pod3.apple.com">apple-pay-gateway-pr-pod3.apple.com</a>       | Production |
| 17.141.128.199 | <a href="https://apple-pay-gateway-pr-pod4.apple.com">apple-pay-gateway-pr-pod4.apple.com</a>       | Production |
| 17.141.129.12  | <a href="https://apple-pay-gateway-pr-pod5.apple.com">apple-pay-gateway-pr-pod5.apple.com</a>       | Production |
| 17.171.78.9    | <a href="https://apple-pay-gateway-nc-pod1-dr.apple.com">apple-pay-gateway-nc-pod1-dr.apple.com</a> | Production |
| 17.171.78.73   | <a href="https://apple-pay-gateway-nc-pod2-dr.apple.com">apple-pay-gateway-nc-pod2-dr.apple.com</a> | Production |
| 17.171.78.137  | <a href="https://apple-pay-gateway-nc-pod3-dr.apple.com">apple-pay-gateway-nc-pod3-dr.apple.com</a> | Production |
| 17.171.78.201  | <a href="https://apple-pay-gateway-nc-pod4-dr.apple.com">apple-pay-gateway-nc-pod4-dr.apple.com</a> | Production |
| 17.171.79.13   | <a href="https://apple-pay-gateway-nc-pod5-dr.apple.com">apple-pay-gateway-nc-pod5-dr.apple.com</a> | Production |
| 17.141.128.9   | <a href="https://apple-pay-gateway-pr-pod1-dr.apple.com">apple-pay-gateway-pr-pod1-dr.apple.com</a> | Production |
| 17.141.128.73  | <a href="https://apple-pay-gateway-pr-pod2-dr.apple.com">apple-pay-gateway-pr-pod2-dr.apple.com</a> | Production |
| 17.141.128.137 | <a href="https://apple-pay-gateway-pr-pod3-dr.apple.com">apple-pay-gateway-pr-pod3-dr.apple.com</a> | Production |
| 17.141.128.201 | <a href="https://apple-pay-gateway-pr-pod4-dr.apple.com">apple-pay-gateway-pr-pod4-dr.apple.com</a> | Production |
| 17.141.129.13  | <a href="https://apple-pay-gateway-pr-pod5-dr.apple.com">apple-pay-gateway-pr-pod5-dr.apple.com</a> | Production |

# SetupSDK

Please use following html code to setup payment environment.

Please be aware of the differences of each Web SDK version to avoid loading errors.

<https://js.tappaysdk.com/sdk/tpdirect/v5.14.0>

<https://js.tappaysdk.com/tpdirect/v5.13.1>

Please refer to the following usage examples.

```
<!--  
  Use TPDirect.setupSDK(appID, appKey, serverType)  
  to setup APP ID, App Key, Server Type parameters  
-->  
  
<script src="https://js.tappaysdk.com/sdk/tpdirect/v5.14.0"></script>  
<script>  
  TPDirect.setupSDK(APP_ID, 'APP_KEY', 'sandbox')  
</script>
```

When use web SDK version less than v5.14.0, please use the following path to include the web SDK

```
<script src="https://js.tappaysdk.com/tpdirect/v5.13.1"></script>  
<script>  
  TPDirect.setupSDK(APP_ID, 'APP_KEY', 'sandbox')  
</script>
```

| Name       | Usage                                  |
|------------|----------------------------------------|
| appID      | Please refer to appid                  |
| appKey     | Please refer to appkey                 |
| serverType | Use 'sandbox' for sandbox environment. |

## checkAvailability()

Check if PaymentRequestAPI is available.

```
/**
 * Use TPDirect.paymentRequestApi.checkAvailability() to detect user's browser
 * whether is available to use Payment Request API or not.
 */
TPDirect.paymentRequestApi.checkAvailability()
```

## Setup Apple Pay

```
/**
 * Use TPDirect.paymentRequestApi.setupApplePay to setup parameters about Apple Pay.
 */
TPDirect.paymentRequestApi.setupApplePay({
  merchantIdentifier: 'merchant.tech.cherri',
  countryCode: 'TW'
})
```

| Name (*=required)   | Type   | Content                                                                                                                                                                                                                                                                   |
|---------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| merchantIdentifier* | String | You registered in Apple Developer Merchant Id<br>If you enable Apple Pay on the Web Merchant Application Service,<br>please fill in merchantIdentifier which generated by TapPay (You<br>can find it from Portal > Payment Methods > Apple Pay > Apple<br>Pay on the Web) |
| countryCode         | String | countryCode , default is TW                                                                                                                                                                                                                                               |

# PaymentRequest

Create a paymentRequest object setup transaction info to retrieve the Prime.

```
var paymentRequest = {
  supportedNetworks: ['AMEX', 'JCB', 'MASTERCARD', 'VISA'],
  supportedMethods: ['apple_pay'],
  displayItems: [{
    label: 'TapPay - iPhone8',
    amount: {
      currency: 'TWD',
      value: '1.00'
    }
  }],
  total: {
    label: '總金額',
    amount: {
      currency: 'TWD',
      value : '1.00'
    }
  },
  shippingOptions: [{
    id: "standard",
    label: "🚚 Ground Shipping (2 days)",
    detail: 'Estimated delivery time: 2 days',
    amount: {
      currency: "TWD",
      value: "5.00"
    }
  },
  {
    id: "drone",
    label: "🚀 Drone Express (2 hours)",
    detail: 'Estimated delivery time: 2 hours',
    amount: {
      currency: "TWD",
      value: "25.00"
    }
  }
],
  options: {
    requestPayerEmail: true,
    requestPayerName: true,
    requestPayerPhone: true,
    requestShipping: true,
    shippingType: 'shipping'
  }
}
```

| Name              | Type       | Usage                                                                                  |
|-------------------|------------|----------------------------------------------------------------------------------------|
| supportedNetworks | Array      | Setup supported networks. Support parameters "VISA" 、 "MASTERCARD" 、 "JCB" and "AMEX". |
| supportedMethods  | Array      | Setup supported methods                                                                |
| displayItems      | Array      | For the format, please refer to the table shown below                                  |
| total             | JSONObject | For the format, please refer to the table shown below                                  |
| shippingOptions   | JSONObject | For the format, please refer to the table shown below                                  |
| options           | JSONObject | For the format, please refer to the table shown below                                  |

### displayItems format

| Name            | Type       | Usage                                                                                                                                                                                                                                                               |
|-----------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label           | String     | Item Name                                                                                                                                                                                                                                                           |
| amount          | JSONObject | value: item amount<br>currency: item currency                                                                                                                                                                                                                       |
| isAmountPending | Boolean    | Whether to use apple pay deferred payment, default is false.<br>If isAmountPending is true, transaction amount will show "Amount Pending".<br>You can only choose isAmountPending or amount.value for the same item<br>More detail please refer to Deferred Payment |

### total format

| Name              | Type       | Usage                                                                                                                                                                                            |
|-------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label             | String     | Transaction Summary                                                                                                                                                                              |
| amount            | JSONObject | value: total amount<br>currency: currency                                                                                                                                                        |
| isAmountPending   | Boolean    | Whether to use apple pay deferred payment, and default is false.<br>More detail please refer to                                                                                                  |
| isShowTotalAmount | Boolean    | Apple Pay total field display amount or AMOUNT PENDING, default is true<br>You can only choose isAmountPending or amount.value for the same item<br>More detail please refer to Deferred Payment |

### shippingOptions format

| Name   | Type       | Usage                                                 |
|--------|------------|-------------------------------------------------------|
| id     | String     | Shipping Name                                         |
| label  | String     | Shipping type description                             |
| detail | String     | Shipping detail description (Apple Pay Only)          |
| amount | JSONObject | value: Shipping amount<br>currency: Shipping currency |

### options format

| Name              | Type   | Usage                                                                                             |
|-------------------|--------|---------------------------------------------------------------------------------------------------|
| requestPayerEmail | Bool   | Request Payer Email                                                                               |
| requestPayerName  | Bool   | Request Payer Name                                                                                |
| requestPayerPhone | Bool   | Request Payer Phone                                                                               |
| requestShipping   | Bool   | Request Payer Shipping address                                                                    |
| shippingType      | String | Shipping type , If you want to setup please refer to shippingType<br>shipping , delivery , pickup |

After you setup payment request object, please use following method to setup Payment Request API

```
/**
 * Use TPDirect.paymentRequestApi.setupPaymentRequest to setup payment request
 * object
 * and return object which decide the user's browser support Payment Request API
 * and the user have the card to make payments or not in callback function
 */

TPDirect.paymentRequestApi.setupPaymentRequest(paymentRequest, function (result) {
  if (!result.browserSupportPaymentRequest) {
    console.log('Browser not support PaymentRequest')
    return
  }
  if (result.canMakePaymentWithActiveCard === true) {
    console.log('Current device have supported card')
  } else {
    console.log('Current device without supported card to make payment')
  }
})
```

setupPaymentRequest have a callback function, callback function have following object properties.



| Name   | Type       | Usage                                                 |
|--------|------------|-------------------------------------------------------|
| result | JSONObject | For the format, please refer to the table shown below |

#### result format

| Name                         | Type    | Usage                                                                                                                                                                                        |
|------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| browserSupportPaymentRequest | Boolean | Does Browser support Payment Request API<br>true: Support<br>false: Not Support                                                                                                              |
| canMakePaymentWithActiveCard | Boolean | Does this device have card to make payment<br>Apple pay only check user have setup card in Apple Pay.<br>true: The device have supported card<br>false: The device don't have supported card |

## Deferred Payment

Please contact TapPay Customer Service (support@cherri.tech) to activate Apple Pay deferred payment.

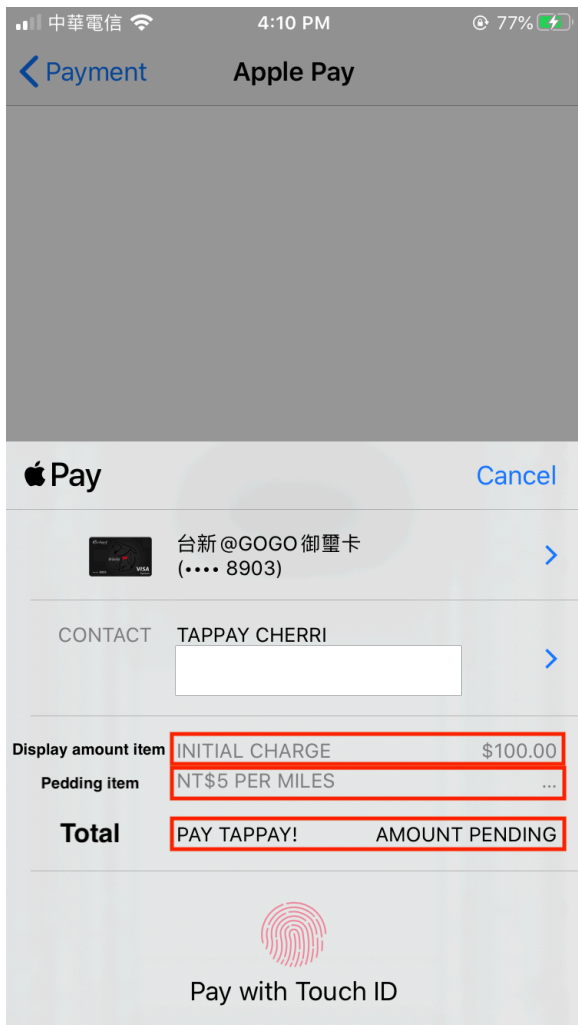
Once the function has been activated, the prime could live for 30 days and payment amount is set by Pay by Prime, not by SDK.

The property total.isAmountPending of paymentRequest could determine whether this transaction enables deferred payment or not. Default is false

The property total.isShowTotalAmount of paymentRequest could determine that total amount of the payment sheet shows the sum of each payment item's amount or AMOUNT PENDING. Default is false

If isAmountPending:true has been set in displayItems of paymentRequest, the payment item's amount of the payment sheet will show 『 · · · 』, which means actual payment amount is unknown.

Use deferred payment, please note the following rules



All of the displayItems isAmountPending is false.

| total.isAmountPending | total.isShowTotalAmount | Total field            | Prime expire time |
|-----------------------|-------------------------|------------------------|-------------------|
| TRUE                  | TRUE                    | Display Total Amount   | 30days            |
| TRUE                  | FALSE                   | Display Amount Pending | 30days            |
| FALSE                 | TRUE                    | Display Total Amount   | 90sec             |
| FALSE                 | FALSE                   | Not Support            | X                 |

All of the displayItems isAmountPending is true.

| total.isAmountPending | total.isShowTotalAmount | Total field            | Prime expire time |
|-----------------------|-------------------------|------------------------|-------------------|
| TRUE                  | TRUE                    | Not Support            | X                 |
| TRUE                  | FALSE                   | Display Amount Pending | 30days            |
| FALSE                 | TRUE                    | Not Support            | X                 |
| FALSE                 | FALSE                   | Not Support            | X                 |

All of the displayItems isAmountPending have both.

| total.isAmountPending | total.isShowTotalAmount | Total field            | Prime expire time |
|-----------------------|-------------------------|------------------------|-------------------|
| TRUE                  | TRUE                    | Display Total Amount   | 30days            |
| TRUE                  | FALSE                   | Display Amount Pending | 30days            |
| FALSE                 | TRUE                    | Not Support            | X                 |
| FALSE                 | FALSE                   | Not Support            | X                 |

## Notice

Due to total amount should be set above 0 in MacOS 10.14.1, iOS 12.1 and version lower.

For compatibility, Web SDK v5.4.0 and version higher will set total.amount.value:1 to Apple Pay in following situation.

1. isAmountPending:true has been set in all displayItems of paymentRequest and total amount is set to show 『AMOUNT PENDING』  
(total.isShowTotalAmount:false)
2. The total of displayItems' amount is 0 and total amount is set to show 『AMOUNT PENDING』 (total.isShowTotalAmount:false)
3. There is no items in displayItems and total amount is set to show 『AMOUNT PENDING』 (total.isShowTotalAmount:false)

Besides, if you pay on Mac, but verify by fingerprint or face ID through iPhone, total amount of the payment sheet will show 1.

## shippingOptions

In paymentRequest ShippingOption without detail.

```
shippingOptions: [{  
  id: "standard",  
  label: "🚚 Ground Shipping (2 days)",  
  amount: {  
    currency: "TWD",  
    value: "5.00"  
  }  
}]
```

Apple Pay

取消

卡片與帳單 台新@GOGO御璽卡 (•••• 8903)  
台灣 106 台灣 106 台北 大安區信義路三...

寄送

方式 GROUND SHIPPING (2 DAYS)

聯絡資訊

IPHONE8 \$1.00  
付給「付給 TAPPAY」 \$6.00

在「PlusSeven」上確認

In paymentRequest ShippingOption add detail.

```
shippingOptions: [{  
  id: "standard",  
  label: "🚚 Ground Shipping (2 days)",  
  // apple pay only  
  detail: "Estimated delivery time: 2 days",  
  amount: {  
    currency: "TWD",  
    value: "5.00"  
  }  
}]
```

Apple Pay

取消

卡片與帳單



台新@GOGO御璽卡 (\*\*\*\* 8903)  
台灣 106 台北 大安區 信義路三段106號...

◇

寄送

◇

方式

 GROUND SHIPPING (2 DAYS)  
ESTIMATED DELIVERY TIME: 2 DAYS

◇

聯絡資訊

◇

IPHONE8

\$1.00

付給「付給 TAPPAY」

\$6.00



在「PlusSeven」上確認

## Get Prime

```
/**
 * Use TPDirect.paymentRequestApi.getPrime to get prime from TapPay.
 */

TPDirect.paymentRequestApi.getPrime(function(result) {
  console.log('paymentRequestApi.getPrime result', result)
  if (result.status !== 0) {
    console.error('getPrime failed: ' + result.msg)
    return
  }
  var prime = result.prime
})
```

## Get Prime Result

Get the result and send the Prime back to your server to finish the transaction by calling Pay by Prime API.

```
{
  "prime": String,
  "total_amount": String,
  "status": Int,
  "msg": String,
  "client_ip": String,
  "payer": {
    "name": String,
    "phone": String,
    "email": String
  },
  "shippingAddress": {
    "country": String,
    "addressLine": ArrayString,
    "region": String,
    "city": String,
    "dependentLocality": String,
    "postalCode": String,
    "sortingCode": String,
    "languageCode": String,
    "organization": String,
    "recipient": String,
    "phone": String
  },
  "shippingOption": String,
  "billingAddress": {
    "country": String,
    "addressLine": ArrayString,
    "region": String,
    "city": String,
    "dependentLocality": String,
    "postalCode": String,
    "sortingCode": String,
    "languageCode": String,
    "organization": String,
    "recipient": String,
    "phone": String
  },
  "methodName": String ("apple_pay")
  "requestId": String,
  "card": {
    "lastfour": String,
    "funding": Int,
    "type": Int,
  },
  "card_info": {
    "bincode": String,
    "lastfour": String,
    "issuer": String,
    "issuer_zh_tw": String,
    "bank_id": String,
    "funding": Int,
    "type": Int,
  }
}
```

```

    "level": String,
    "country": String,
    "countrycode": String,
  },
  "merchant_reference_info": {
    "affiliate_codes": ArrayString,
  },
  "prime_expiry_millis": Number
}

```

| Name                    | Type       | Usage                                                                                                                                                                                                                                                                                                  |
|-------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| prime                   | String     | A one-time token that represents a customer's card. You would need this token to pay in the Pay by Prime API.                                                                                                                                                                                          |
| total_amount            | String     | This Transaction total amount.                                                                                                                                                                                                                                                                         |
| status                  | Int        | Response code. 0 indicates success.                                                                                                                                                                                                                                                                    |
| msg                     | String     | Error message                                                                                                                                                                                                                                                                                          |
| client_ip               | String     | Customer IP Address                                                                                                                                                                                                                                                                                    |
| payer                   | JSONObject | Customer Information<br>For the format, please refer to the table shown below                                                                                                                                                                                                                          |
| shippingAddress         | JSONObject | Delivery address information<br>For the format, please refer to the table shown below                                                                                                                                                                                                                  |
| shippingOption          | String     | Delivery method                                                                                                                                                                                                                                                                                        |
| billingAddress          | JSONObject | For the format, please refer to the table shown below                                                                                                                                                                                                                                                  |
| methodName              | String     | ("card" , "android_pay" , "google_pay" or "apple_pay")                                                                                                                                                                                                                                                 |
| requestId               | String     | Unique payment request identifier.                                                                                                                                                                                                                                                                     |
| card                    | JSONObject | For the format, please refer to the table shown below                                                                                                                                                                                                                                                  |
| card_info               | JSONObject | Card information<br>For the format, please refer to the table shown below                                                                                                                                                                                                                              |
| merchant_reference_info | JSONObject | If the merchant uses the co-branded card management in the TapPay portal, and the transaction card number meets the setting, this parameter will be returned.<br><br>Set in TapPay Portal, must limit 20 character and half alphanumeric.<br><br>For the format, please refer to the table shown below |
| prime_expiry_millis     | Number     | Prime Expiry Date<br>Fixed return parameter on latest Web SDK version (From v5.3)                                                                                                                                                                                                                      |

### payer format

| Name  | Type   | Usage                   |
|-------|--------|-------------------------|
| name  | String | Customer's name         |
| phone | String | Customer's phone number |
| email | String | Customer's email        |

### shippingAddress / billingAddress format

| Name              | Type        |
|-------------------|-------------|
| country           | String      |
| addressLine       | ArrayString |
| region            | String      |
| city              | String      |
| dependentLocality | String      |
| postalCode        | String      |
| sortingCode       | String      |
| languageCode      | String      |
| organization      | String      |
| recipient         | String      |
| phone             | String      |

### card format

| Name     | Type   | Usage                                                                           |
|----------|--------|---------------------------------------------------------------------------------|
| lastfour | String | Last four digits of the card                                                    |
| funding  | Int    | Card usage<br>0 = Credit Card<br>1 = Debit Card<br>2 = Prepaid Card             |
| type     | Int    | Card type<br>1 = VISA<br>2 = MasterCard<br>3 = JCB<br>4 = Union Pay<br>5 = AMEX |



## card\_info format

| Name         | Type      | Usage                                                                                           |
|--------------|-----------|-------------------------------------------------------------------------------------------------|
| bincode      | String(6) | First six digits of the card                                                                    |
| lastfour     | String(4) | Last four digits of the card                                                                    |
| issuer       | String    | Card issuer                                                                                     |
| issuer_zh_tw | String    | Issuer chinese name                                                                             |
| bank_id      | String    | Bank identifier                                                                                 |
| funding      | int       | Card usage<br>-1 = Unknown<br>0 = credit card<br>1 = debit card<br>2 = prepaid card             |
| type         | int       | Card type<br>-1 = Unknown<br>1 = VISA<br>2 = MasterCard<br>3 = JCB<br>4 = Union Pay<br>5 = AMEX |
| level        | String    | Card level                                                                                      |
| country      | String    | Country of card issuer                                                                          |
| countrycode  | String    | Country code of card issuer                                                                     |

## merchant\_reference\_info format

| Name            | Type  | Usage                                                                                           |
|-----------------|-------|-------------------------------------------------------------------------------------------------|
| affiliate_codes | Array | Affiliated codes set by the merchant in the Co-brand card management area of the TapPay portal. |

## Example

If you have any questions, please refer our [Example](#) or Apple's [Apple Pay Example](#). Keep in mind that Apple Pay JavaScript API is only available on iOS device running iOS 10 or later or Mac running macOS Sierra (10.12) or later.

## Reference

If you want to integrate more payment methods, please refer to [Payment Request API](#)

## Q&A

If you have to set frame-src of Content Security Policy, please set following two domains.

1. js.tappaysdk.com
2. fraud.tappaysdk.com

# Error

## Web SDK Error Code

| status | msg                                                                       |
|--------|---------------------------------------------------------------------------|
| -7     | [Google Pay] failed to get prime                                          |
| -6     | [Apple Pay] failed to get prime                                           |
| -5     | Unknown Error                                                             |
| -3     | failed to get prime                                                       |
| -1     | SDK Loading Error                                                         |
| -      | -                                                                         |
| 0      | Success                                                                   |
| 5      | Wrong JSON format                                                         |
| -      | -                                                                         |
| 11     | App ID not found                                                          |
| 12     | App name mismatch                                                         |
| 13     | Unknown app error                                                         |
| 16     | App key mismatch                                                          |
| -      | -                                                                         |
| 41     | Wrong Card Format                                                         |
| -      | -                                                                         |
| 80     | Invalid x-api-key or app key                                              |
| 81     | Partner not found                                                         |
| 84     | Partner unauthorized                                                      |
| -      | -                                                                         |
| 122    | Card encrypt error                                                        |
| -      | -                                                                         |
| 401    | Request Cancel, please see the detail of msg                              |
| 402    | Can not obtain payment data, please see the detail of msg                 |
| 403    | [Apple Pay] Get Session error: {Message from apple}                       |
| 404    | [Payment Request API] Unexcept Error, for detail please see originalError |
| 421    | Gateway Timeout                                                           |

| status | msg                                                              |
|--------|------------------------------------------------------------------|
| 422    | Authorization Timeout                                            |
| -      | -                                                                |
| 530    | Invalid arguments : app_id                                       |
| 531    | Missing arguments : app_key                                      |
| 532    | Missing arguments : app_name                                     |
| 533    | Missing arguments : card_number                                  |
| 534    | Missing arguments : card_expiry_date                             |
| 570    | Out of range : app_key                                           |
| 571    | Out of range : app_name                                          |
| 572    | Out of range : card_number                                       |
| 573    | Out of range : card_expiry_date                                  |
| 574    | Out of range : card_ccv                                          |
| 589    | Invalid arguments : platform_type                                |
| 590    | Missing arguments : android_merchant_id                          |
| 591    | Missing arguments : pay_token_data                               |
| 592    | Missing arguments : apple_merchant_id                            |
| 594    | Out of range : apple_merchant_id                                 |
| 598    | Out of range : android_merchant_id                               |
| 599    | Missing arguments : pay_token_data > ephemeralPublicKey          |
| 600    | Missing arguments : pay_token_data > encryptedMessage            |
| 601    | Missing arguments : pay_token_data > tag                         |
| 602    | Out of range : pay_token_data > ephemeralPublicKey               |
| 603    | Out of range : pay_token_data > encryptedMessage                 |
| 604    | Out of range : pay_token_data > tag                              |
| 605    | Missing arguments : pay_token_data > data                        |
| 606    | Missing arguments : pay_token_data > version                     |
| 607    | Missing arguments : pay_token_data > signature                   |
| 608    | Missing arguments : pay_token_data > header > ephemeralPublicKey |
| 609    | Missing arguments : pay_token_data > header > publicKeyHash      |
| 610    | Missing arguments : pay_token_data > header > transactionId      |
| 611    | Out of range : pay_token_data > data                             |

| status | msg                                                              |
|--------|------------------------------------------------------------------|
| 612    | Out of range : pay_token_data > version                          |
| 613    | Out of range : pay_token_data > header > ephemeralPublicKey      |
| 614    | Out of range : pay_token_data > header > publicKeyHash           |
| 615    | Out of range : pay_token_data > header > transactionId           |
| 616    | Missing arguments : pay_token_data > header                      |
| 617    | Out of range : fraud_id                                          |
| 618    | Out of range : pay_token_data > protocolVersion                  |
| 619    | Out of range : pay_token_data > signature                        |
| 626    | Invalid arguments : platform_type                                |
| 634    | Missing arguments : pay_token_data > protocolVersion             |
| 638    | Missing arguments : merchant_app_launch_uri                      |
| 639    | Out of range : merchant_app_launch_uri                           |
| 655    | Missing arguments : reference_id                                 |
| 660    | Out of range : reference_id                                      |
| -      | -                                                                |
| 915    | System error, please contact TapPay customer service             |
| 916    | Signature verification is not proceed                            |
| 917    | Signature verification error                                     |
| -      | -                                                                |
| 2000   | [Direct Pay] Card number is empty                                |
| 2001   | [Direct Pay] Card month/year is empty                            |
| 2012   | [Direct Pay] CCV is wrong format                                 |
| 2013   | Expired Card                                                     |
| 2200   | [Google Pay] Unexcept Error, for detail please see originalError |
| -      | -                                                                |
| 13002  | This apple pay merchant identifier is disabled                   |

## iOS SDK Error Code

| status | msg                                  |
|--------|--------------------------------------|
| 0      | Success                              |
| 5      | Wrong JSON format                    |
| -      | -                                    |
| 11     | App ID not found                     |
| 12     | App name mismatch                    |
| 13     | Unknown app error                    |
| 16     | App key mismatch                     |
| -      | -                                    |
| 30     | Device not support                   |
| 31     | iOS SDK version is too old           |
| 32     | Android SDK version is too old       |
| 33     | SDK version is not sent              |
| -      | -                                    |
| 41     | Wrong card format                    |
| -      | -                                    |
| 80     | Invalid x-api-key or app key         |
| 81     | Partner not found                    |
| 84     | Partner unauthorized                 |
| -      | -                                    |
| 122    | Card encrypt error                   |
| -      | -                                    |
| 421    | Gateway Timeout                      |
| 422    | Authorization Timeout                |
| -      | -                                    |
| 530    | Invalid arguments : app_id           |
| 531    | Missing arguments : app_key          |
| 532    | Missing arguments : app_name         |
| 533    | Missing arguments : card_number      |
| 534    | Missing arguments : card_expiry_date |

| status | msg                                                              |
|--------|------------------------------------------------------------------|
| 570    | Out of range : app_key                                           |
| 571    | Out of range : app_name                                          |
| 572    | Out of range : card_number                                       |
| 573    | Out of range : card_expiry_date                                  |
| 574    | Out of range : card_ccv                                          |
| 581    | Invalid arguments : devicetype                                   |
| 582    | Invalid arguments : sdkversion                                   |
| 583    | Out of range : deviceInfo > deviceId                             |
| 584    | Out of range : deviceInfo > deviceModel                          |
| 585    | Out of range : deviceInfo > deviceOsVersion                      |
| 586    | Out of range : geoloc                                            |
| 589    | Invalid arguments : platform_type                                |
| 591    | Missing arguments : pay_token_data                               |
| 592    | Missing arguments : apple_merchant_id                            |
| 594    | Out of range : apple_merchant_id                                 |
| -      | -                                                                |
| 600    | Missing arguments : pay_token_data > encryptedMessage            |
| 605    | Missing arguments : pay_token_data > data                        |
| 606    | Missing arguments : pay_token_data > version                     |
| 607    | Missing arguments : pay_token_data > signature                   |
| 608    | Missing arguments : pay_token_data > header > ephemeralPublicKey |
| 609    | Missing arguments : pay_token_data > header > publicKeyHash      |
| 610    | Missing arguments : pay_token_data > header > transactionId      |
| 611    | Out of range : pay_token_data > data                             |
| 612    | Out of range : pay_token_data > version                          |
| 613    | Out of range : pay_token_data > header > ephemeralPublicKey      |
| 614    | Out of range : pay_token_data > header > publicKeyHash           |
| 615    | Out of range : pay_token_data > header > transactionId           |
| 616    | Missing arguments : pay_token_data > header                      |
| 617    | Out of range : fraud_id                                          |
| 626    | Invalid arguments : platform_type                                |

| status | msg                                                                                      |
|--------|------------------------------------------------------------------------------------------|
| 638    | Missing arguments : merchant_app_launch_uri                                              |
| 639    | Out of range : merchant_app_launch_uri                                                   |
| 801    | Missing arguments : merchant_app_launch_uri or merchant_universal_link                   |
| 802    | Doesn't support merchant_app_launch_uri or merchant_universal_links concurrently         |
| 803    | Out of range : merchant_universal_links                                                  |
| -      | -                                                                                        |
| 915    | System error, please contact TapPay customer service                                     |
| -      | -                                                                                        |
| 1001   | Certificate server connection exception (http status code: {http status code})           |
| 1002   | Certificate local connection exception (exception message: {exception message})          |
| 1003   | Certificate data error                                                                   |
| -      | -                                                                                        |
| 88001  | SDK Is Not Activate                                                                      |
| 88003  | Lost Parameter                                                                           |
| 88009  | Can not obtain Apple Pay payment data                                                    |
| 88010  | Please Running on the Device                                                             |
| 88012  | Invalid cart setting . While isAmountPending is false , it should not have pending item. |
| 88013  | isAmountPending and isShowTotalAmount couldn't be false at the same time.                |
| 88014  | Total amount couldn't be displayed if there is only pending items.                       |
| 88015  | isAmountPending must be true if the amount of payment item is pending.                   |
| 88016  | paymentItem amount could't not be 0.00                                                   |



# Android SDK Error Code

| status | msg                             |
|--------|---------------------------------|
| -4     | Unknown Error                   |
| -3     | Internet Unavailable            |
| -      | -                               |
| 0      | Success                         |
| 5      | Wrong JSON format               |
| -      | -                               |
| 11     | App ID not found                |
| 12     | App name mismatch               |
| 13     | Unknown app error               |
| 16     | App key mismatch                |
| -      | -                               |
| 30     | Device not support              |
| 31     | iOS SDK version is too old      |
| 32     | Android SDK version is too old  |
| 33     | SDK version is not sent         |
| 41     | Wrong card format               |
| 80     | Invalid x-api-key or app key    |
| 81     | Partner not found               |
| 84     | Partner unauthorized            |
| -      | -                               |
| 122    | Card encrypt error              |
| -      | -                               |
| 421    | Gateway Timeout                 |
| 422    | Authorization Timeout           |
| -      | -                               |
| 530    | Invalid arguments : app_id      |
| 531    | Missing arguments : app_key     |
| 532    | Missing arguments : app_name    |
| 533    | Missing arguments : card_number |

| status | msg                                                     |
|--------|---------------------------------------------------------|
| 534    | Missing arguments : card_expiry_date                    |
| 570    | Out of range : app_key                                  |
| 571    | Out of range : app_name                                 |
| 572    | Out of range : card_number                              |
| 573    | Out of range : card_expiry_date                         |
| 574    | Out of range : card_ccv                                 |
| 581    | Invalid arguments : devicetype                          |
| 582    | Invalid arguments : sdkversion                          |
| 583    | Out of range : deviceInfo > deviceId                    |
| 584    | Out of range : deviceInfo > deviceModel                 |
| 585    | Out of range : deviceInfo > deviceOsVersion             |
| 586    | Out of range : geoloc                                   |
| 589    | Invalid arguments : platform_type                       |
| 590    | Missing arguments : android_merchant_id                 |
| 591    | Missing arguments : pay_token_data                      |
| 598    | Out of range : android_merchant_id                      |
| 599    | Missing arguments : pay_token_data > ephemeralPublicKey |
| -      | -                                                       |
| 600    | Missing arguments : pay_token_data > encryptedMessage   |
| 601    | Missing arguments : pay_token_data > tag                |
| 602    | Out of range : pay_token_data > ephemeralPublicKey      |
| 603    | Out of range : pay_token_data > encryptedMessage        |
| 604    | Out of range : pay_token_data > tag                     |
| 605    | Missing arguments : pay_token_data > data               |
| 606    | Missing arguments : pay_token_data > version            |
| 607    | Missing arguments : pay_token_data > signature          |
| 611    | Out of range : pay_token_data > data                    |
| 612    | Out of range : pay_token_data > version                 |
| 617    | Out of range : fraud_id                                 |
| 618    | Out of range : pay_token_data > protocolVersion         |
| 619    | Out of range : pay_token_data > signature               |

| status | msg                                                                              |
|--------|----------------------------------------------------------------------------------|
| 626    | Invalid arguments : platform_type                                                |
| 634    | Missing arguments : pay_token_data > protocolVersion                             |
| 638    | Missing arguments : merchant_app_launch_uri                                      |
| 639    | Out of range : merchant_app_launch_uri                                           |
| 658    | Missing arguments : pay_token_data > type                                        |
| 659    | Out of range : pay_token_data > type                                             |
| 801    | Missing arguments : merchant_app_launch_uri or merchant_universal_link           |
| 802    | Doesn't support merchant_app_launch_uri or merchant_universal_links concurrently |
| 803    | Out of range : merchant_universal_links                                          |
| -      | -                                                                                |
| 915    | System error, please contact TapPay customer service                             |
| 916    | Signature verification is not proceed                                            |
| 917    | Signature verification error                                                     |
| -      | -                                                                                |
| 1001   | Certificate server connection exception (http status code: {http status code})   |
| 1002   | Certificate local connection exception (exception message: {exception message})  |
| 1003   | Certificate data error                                                           |
| -      | -                                                                                |
| 88004  | Parameter Format Error                                                           |
| 88007  | Input Form Not Set                                                               |
| 88009  | Can not obtain payment data                                                      |

# Reference

## 1. appId

An integer identifier for your application or website.

This is used to activate your application or website in order to start using our services.

You can find it via Portal > Developer > Application.

Application

|                 |                                  |                                                                                     |
|-----------------|----------------------------------|-------------------------------------------------------------------------------------|
| <b>App ID</b>   | 1                                |  |
| <b>App Key</b>  | <a href="#">(show key)</a> ***** |                                                                                     |
| <b>Platform</b> | <b>App Name</b>                  |                                                                                     |
| Android         | Package Name: *                  |                                                                                     |
| iOS             | Bundle Name: *                   |                                                                                     |
| Web             | Domain Name: *                   |                                                                                     |

## 2. appKey

An authenticator key for your application or website.

This is used to activate your application or website in order to start using our services.

You can find it via Portal > Developer > Application.

Application

|                 |                                  |                                                                                       |
|-----------------|----------------------------------|---------------------------------------------------------------------------------------|
| <b>App ID</b>   | 1                                |  |
| <b>App Key</b>  | <a href="#">(show key)</a> ***** |                                                                                       |
| <b>Platform</b> | <b>App Name</b>                  |                                                                                       |
| Android         | Package Name: *                  |                                                                                       |
| iOS             | Bundle Name: *                   |                                                                                       |
| Web             | Domain Name: *                   |                                                                                       |

## 3. Amount

Total price for a particular transaction.

For refunds, a smaller than original amount is acceptable if partial refund is requested.

TWD : Lower limit of each transaction is NTD 1, upper limit of each transaction is NTD 20,000,000. Please fill in 1 when the transaction is TWD 1.

HKD : Lower limit of each transaction is HKD 0.01, upper limit of each transaction is HKD 252,500. Please fill in 101 when the transaction is HKD 1.01

MYR : Lower limit of each transaction is MYR 0.01, upper limit of each transaction is MYR 135,000. Please fill in 101 when the transaction is MYR 1.01

USD limit of each transaction is USD 0.01, upper limit of each transaction is USD 33,169. Please fill in 101 when the transaction is USD 1.01

## 4. Currency

The letter abbreviation for currency, following ISO 4217.  
For example,

| Currency          | Code |
|-------------------|------|
| Taiwan New Dollar | TWD  |
| Hong Kong Dollar  | HKD  |
| Malaysia Dollar   | MYR  |
| US Dollar         | USD  |
| Japanese Yen      | JPY  |

## 5. Partial Refund

Partial refund could only be executed after captured successfully.  
Payment process is as follows:

Transaction happens > Payment is captured based on delay\_capture\_in\_days >  
Partial refund is available only after captured successfully

e.g. A transaction happened on October 9th.

If the delay\_capture\_in\_days parameter is 0, then the transaction will be captured on the same day. However, Partial refund only could be executed after captured successfully.

e.g. A transaction happened on October 9th.

If the delay\_capture\_in\_days parameter is 3, then the transaction will be captured on October 12th. Therefore, partial refund is available starting from October 13th if the transaction has been successfully captured.

✱ If it shows “capture successfully” from TapPay, but couldn’t do partial refund.  
Please try it again one day after due to the bank issue.

## 6. Production

The official environment that charges customer's cards for transactions.

Your product should be in this environment when it officially launches and goes live.

You can specify the environment for your application during

`TPDSetup.initInstance()`.

You can specify the environment for your website during `TPDirect.setupSDK()`.

Things to remember :

1. Register your merchants in the production environment on Portal and use the official bank's acquirer account.
2. Register your IP in the production environment on Portal.
3. Use the production app key instead of the sandbox one.
4. When setting the Frontend environment, change the server type to production.
5. The Backend APIs should use the production domain instead of the sandbox one. (<https://sandbox.tappaysdk.com/tpc/> -> <https://prod.tappaysdk.com/tpc/>)

## 7. Refund

An API that allows you to refund transaction, fully or partially. Please refer to the backend documentation: Refund API.

## 8. Sandbox

A type of environment that has all the functions of a production environment except no money will be charged for the transactions.

You should first test your application or website in this environment before you move on to the production environment.

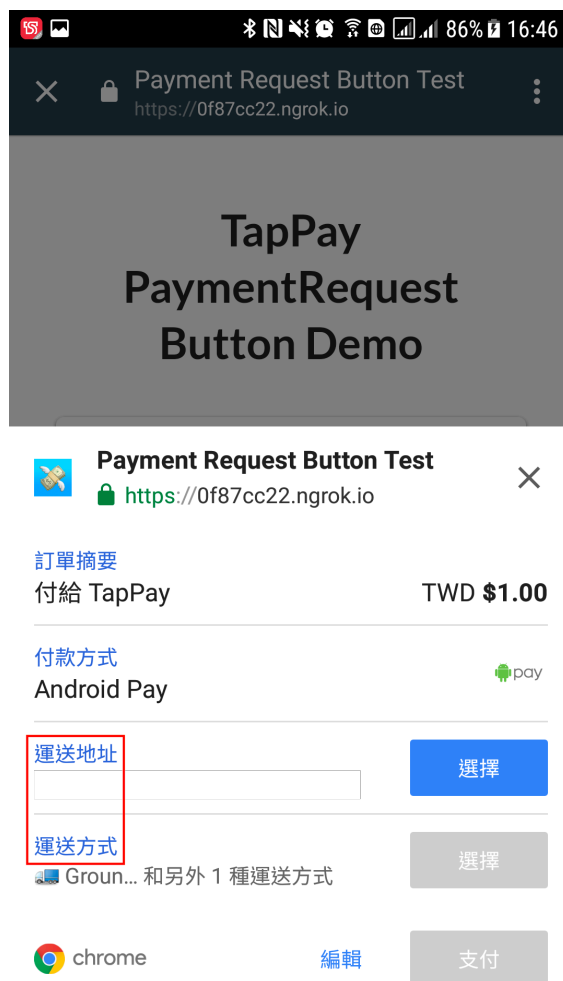
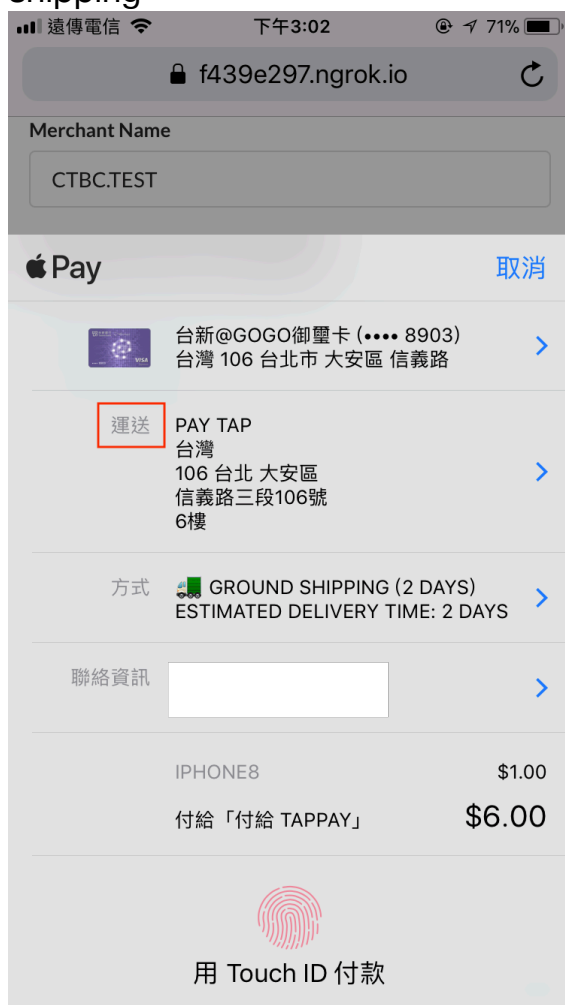
You can specify the environment for your application during `TPDSetup.initInstance()`.

You can specify the environment for your website during `TPDirect.setupSDK()`.

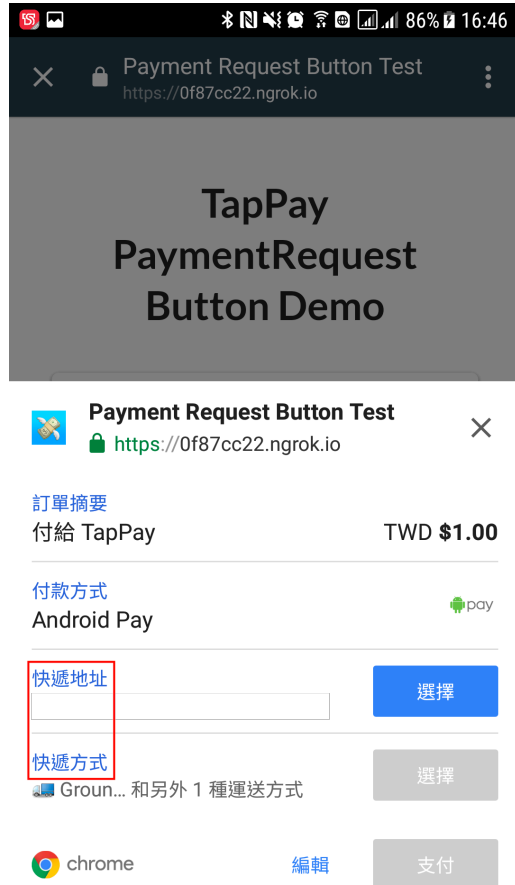
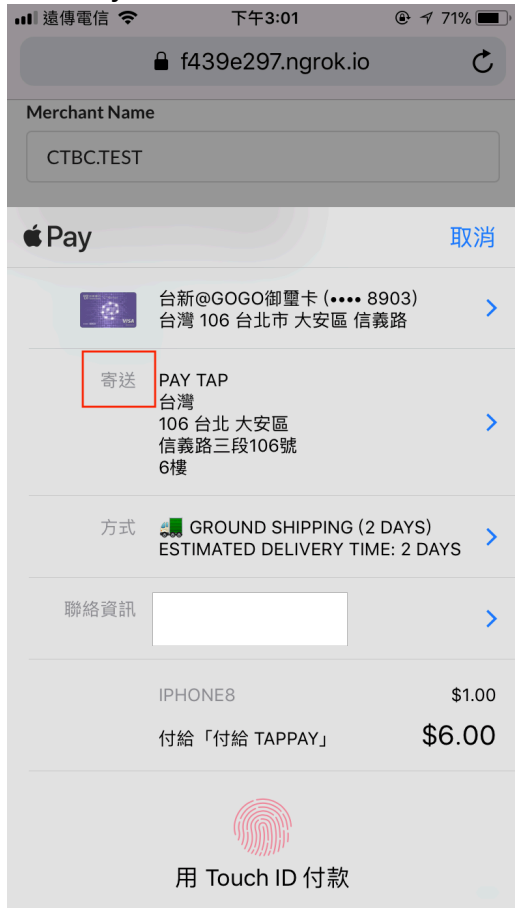
## 8. shippingType

Shipping type , show on Payment Request API

## 1. shipping



## 2. delivery



## 3. pickup

